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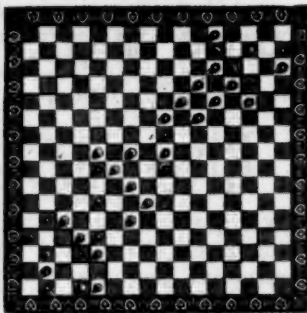
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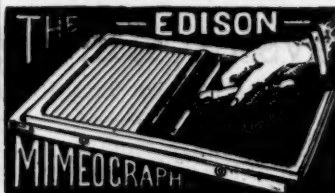
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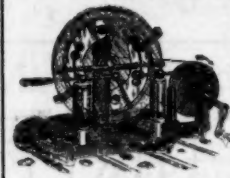
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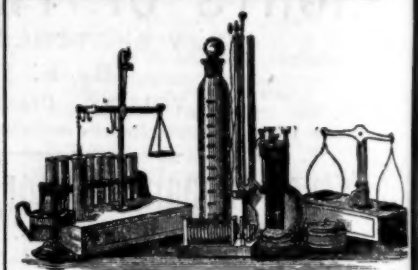
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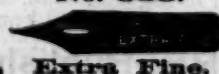
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THE school-room is a battle ground for the teacher; if he comes off victorious it is only because he acts, lives, moves, breathes in the spirit of the Great Teacher. We counsel him to turn daily to that magnificent character to find the model on which to form his own. "If you love them that love you, what reward have ye?" Day after day the unpunctual, the untidy, the careless, the repulsive, the untruthful, the disobedient, will enter and claim attention. Shall they have it? Human nature says, "No;" the purified and sanctified nature says, "Yes. I will send the rain of my affection alike on the just and the unjust."

It is only a great-minded teacher that can employ a large benevolence in the school-room. It is not now a question of government, it is a question of reflecting the divine pattern that we would urge upon the teacher. The ideal of greatness and goodness must be carried down from generation to generation. Some of the race must stand on higher levels than others, must exemplify a nobler character, a willingness to help those that are in need, that are ignorant and depraved; and this lot is cast upon the teacher. Primarily, his function is to instruct in the elements of knowledge, but he cannot do that unless he stands before his pupils as one who says to them morally as well as intellectually, "Come up higher."

In one of the churches of this city there is a memorial window; it represents the mother carrying her child, enfeebled by hunger and thirst. While in this feeble and depressed condition, the fountain of water is seen; the mother lifts up the child and points to it: "See there the water, have courage; it is near." The child raises its head, and is filled with hope and animation.

This is a picture of the teacher's work. Thousands would degrade it by simply hearing lessons; but the masters in all ages have protested against this. The teacher must be one whose sole thought and effort is to raise men and women to higher levels of thought and action. Has he taught the multiplication table? Has he done no more? Has he not impressed at the same time the dignity of labor, the rewards of application, the pleasure of enlightenment? These are but a few of the lessons that flow down, as it were, from the teacher's life into the pupil's life.

But all this demands that the teacher put aside all littleness, the regard that comes because of a fine countenance, or better apparel, or of quick or ready learning of lessons. He must occupy a high ground—those that need him must feel that he is for them. He is there for the needy, the backward, the dull, the listless, the unearnest. By looking at these daily with eyes of affection, coming to them daily with hands of help, he carries forward a work that reflects back its influence upon himself. He wins in the battle if he fights with the sword of the spirit of love.

WE went away the other night from Denman Thompson's "Old Homestead," thinking why spectacular plays could not be made a force in school work; for instance, "plays" of various scenes of the Revolutionary war, where Washington is made to walk and talk; where Franklin, Putnam, Aaron Burr, Arnold, Greene, and many other actors are made to pass before the audience in their appropriate dress; where the truthful pictures of these stirring times are reproduced; in fact, where the history of the past is brought before the eyes and ears of the audience. The theatre has always played a very important part in the education of the world. It is admitted that it has frequently been used for unworthy purposes, but this is no reason why it may not be used for high and noble ends. In school work the dialogue has for years been popular, more so in the generation past than at present, but the time will come when this force in education will be used in all of our schools. A series of historical reproductions in all respects truthful, and life-like, using the very words of the actors, and causing scenes and incidents of the past to pass in succession before the sight, and within the ability of high school pupils to use, would, we believe, do a great deal of good. In using such plays we should be adopting an old Greek force, which for several hundred years was used under the direction, and by the authority of the state, for the purpose of educating, as well as amusing the people.

THE increase of private schools, as is now the case, when free public schools abound, is a problem that is well worth considering. Why should there be a private school under such circumstances? Or perhaps the best inquiry would be, In what does the private school differ from the public school? If the matter is closely looked into, it will be found that the essential difference is that in the latter the influence of the individual pupil and parent count for something. There are other points, such as smallness of classes, attention to behavior and dress, but the essential feature of difference is that the parent can object to a study or recitation, and the pupil can obtain attention and assistance that would be impossible in a public school.

This was illustrated in one of the daily papers a few days since, in the answer one gentleman gave to another when the question was asked:

"Why do you send to a private school and pay taxes to support the public schools too?"

"I do it so my boy can get an answer to a question; if he does not understand a thing at the school, he can ask for an explanation, and he will be

answered. Besides, if I think the teacher's plans are not good, I tell him so. Now, when he went to the public school, he was treated with cold contempt."

The courses of study do not essentially vary. The modes of teaching are substantially the same, but the treatment of the pupils is not the same. The pupil of the private school is not allowed to go away dissatisfied. He has far more liberty of action; much depends on the personal element in the teacher.

The weak point in the private school is that the teacher is tempted to yield too much to the wishes of the pupils; but if this is done the school suffers a loss of pupils, so that the teacher is obliged to find the just medium. In the private school there must be attention to the individual. If the personal element is wanting, the school becomes unattractive, or the pupils drop out of sight.

The weak point in the public school is its wholeness; pupils are marshaled and taught in platoons, sometimes in regiments. Against this, human nature rebels; it is impossible to found young persons educationally, if they are taken in masses. Impressions may be made on large numbers by orators, but in education there must be more than impressions; the impression must be developed something after the nature of the photograph, with infinite pains. The public school teacher is obliged, too, to follow a fixed course of procedure; and then, too, the memories of his pupils are examined to find whether he has labored faithfully or not. It will be found that the best public schools follow the plan of management of the best private schools.

The private schools claim that they can arouse a spirit that the public school cannot. A school like Phillips Academy, for example, brings together a class of young men susceptible of being aroused to high pitches of enthusiasm, and impresses them lastingly. The story of one such is told in Tom Brown.

It is common for each of these schools to under-rate each other; the whole value of each depends on the teacher. The teacher makes the school, whether public or private.

THERE has been a great deal of discussion during the past two years concerning the "whole boy," and it has been charged that only a part of the child's nature has been trained, the other part having been neglected. Two points have been made—the first, that book-learning is not education, and the second that a child is made up of three parts—mind, soul or moral powers, and body; also that the training of each of these equally important parts, has not been attended to. In other words, the harmonious development of the child has not been regarded. It is our belief that all one-sided culture is injurious. Unless the body is strong enough to bear the work of the mind, how is the mind to make itself felt? And then suppose the body and mind are strong, but the moral powers are weak; what sort of a man will the boy become? Any fair-minded thinker must conclude that it is useless to send any less than the whole boy to school. Partly educated men and women are the curse of the world. They look upon things through imperfect glasses, and cannot, therefore, see things in their true light. All distorted images are misleading. Education must be equable. Nothing less is valuable.

The inference from the above is plain; viz., that the child must have all the means of training within our power to give it. This we owe. It is a debt demanding payment, or an adequate penalty. It is on this account we urge the adoption of manual training in all schools. It is just and right, a duty to our children. We put the demand on high ground, for it is of right there, if anywhere.

WHAT DO WE MEAN BY EDUCATION?

There have been many ideas as to what education is. Some have claimed that it can do everything, or that training does all that can be done for a human being; others have as stoutly declared that it can do nothing, that nature does all. The truth lies between these two extremes; yet it is the opinion of both Lessing and Rade-stock that all that it is possible for education to do is only to develop and unfold what is in the child, in *potentiality*, at the start. Rousseau evidently had this opinion when he said that "education is nothing more than a bundle of habits." According to this idea, the child is born with certain pre-determined and fixed forces, yet undeveloped, but so strongly and firmly in the nature as to be impossible of change, and that all we can do is to build upon these foundations, and form habits in accordance with these ante-natal forces.

Now it is certain that many inborn tendencies can be destroyed, and that others can be substituted in their places. While education cannot do everything, it can do a great deal. The distinguished philosopher Kant held this opinion, for he said that "to develop in the individual all the perfection of which he is capable is the great object of education." The words italicized mean a great deal. Just how much a child is capable of is a hard question to determine; in fact, it cannot be determined until after trial. Kant also expressed a similar thought when he wrote that "the processes of education consist in answering the questions, 'What can I know?' 'What ought I to do?' 'What may I hope?'" How much a child *can* know, and *can* do, can be determined only after thorough trial. The work of the skilful teacher is to determine just how far a child can be expected to do his work well, and then get him to work up to this point; in other words, to get out of a pupil all the mental, moral, and physical results possible. But he will study the child so carefully that he will not expect him to do more than he is able to do. How many have made great mistakes, and so done great injury! Some children can never attain great eminence in mathematics or the languages; they may become distinguished scientists, but never linguists or mathematicians. It is evidently wrong to require such students to study what they have no adaptation for, on the theory that the points of weakness are the ones that need the most training. Many teachers have here committed great blunders, and done incalculable injury. A few who have been declared fools because they failed in mathematics, have afterward discovered that they were not, and gone on to success in other branches, but many who have been so denounced have never recovered from the injury, and died unsuccessful because they were not able to discover their sphere. The lines of greatest activity in a child should be early discovered, and education should start along these lines. It will soon be found that the points of dullness will be helped, if the mind is exercised on the points in which it is not dull. A boy of twelve who could not understand arithmetic was permitted to let it entirely alone for three years; then it was found that he could master its problems with the same success as other pupils of his age. This result would not have been reached had he been vexed with mathematical puzzles. As it was, he attained success. There is an important point here which students of education will carefully note; in other words, it should at once be determined exactly what we mean by education.

OUR IDEALS.

Educational ideals we mean. We may have correct ideals of business, law, theology, or medicine, but how about education? What are our ideals here? Who is the educated man? Is he one who can succeed in making money? He who can become a successful lawyer? He who can cure the greatest number of diseases or who can preach the most eloquent sermon? What qualities does the ideal man possess? Here is a great question; let us see how it can be answered. Bishop Temple had a remarkable ideal, to which we call the attention of our thinking readers: "The power whereby the present ever gathers into itself the results of the past, transforms the human race into a colossal man, whose life reaches from the Creation to the Day of Judgment. The successive generations of men are days in this man's life. The discoveries and inventions which characterized the different epochs of the world's history are his works. The creeds and doctrines, the opinions had principles of the successive ages are his thoughts. The state of society at different times are his manners. He grows in knowledge and self-control, in visible size, just

as we do. And his education is in the same way, and for the same reason, precisely similar to ours." This is a wonderful thought here, and those who grasp it will get the largest and, in many respects, the best ideal of education ever conceived. Pascal expressed the same thought when he said that "education regards the entire succession of men in every period of the world as one man, always living, and incessantly learning." A recent English author reiterates the same thought. He wrote, "The power whereby the present ever gathers into itself the results of the past, transforms the human race into a colossal man, whose days are measured by generations."

What does all this mean? Just this: that our conception of an ideal man must comprehend all generations. We cannot measure ourselves by ourselves. The race has always been learning, and we must know what the wisdom is that has been learned. In President Patton's address in Brooklyn last summer, he expressed this thought when he said that "education is simply the efforts that we individually make to realize in the case of the individual what has already been realized in the case of the race." He also said that "it is our duty to lead the child to realize in his own experience, and embody in his own personal life, as much as possible of the great civilization which the race he belongs to has already attained, through the agency of inspiration and instinct."

In order to get this knowledge the teacher must be a student of civilization and education. He must not only study what schools and teachers have done with their straight jackets and whips, but he must know and feel what those forces have done that have shaped the larger civilization of the world. These forces must be brought to bear upon each child, so that he can realize to the largest extent possible the civilization of the entire race.

THE COURTESIES OF LIFE.

At a teachers' institute the advisability of teaching pupils to be civil was discussed. Why hesitate for a moment? Every child should be taught politeness; home influence should be supplemented by school influence. The teacher can in many ways bestow upon and secure polite attention from pupils. The school-room will be more agreeable, if courtesy is found within its walls; the work of teaching will be more pleasant if given and received in a courteous manner. But the line must be drawn. Exerting authority to obtain politeness from pupils, is not what is proposed.

Unless a stranger entering the class-room is distinguished, holds some high position, or is noted for something, the scholars should not rise; if they are to do so, there should be a certain signal for the school to stand—not a loud ringing of a bell, but a simple tap of a pencil; it should be practiced until the scholars are familiar with it, and can rise from their seats easily and noiselessly. It is held by some teachers that when a stranger enters the room, the scholars must keep their eyes fixed on their desks, hands on books, and not raise them until the door closes on the visitor. This is absurd; if a recitation is going on, or writing or drawing is in progress, of course the scholars should not take their attention from it. If otherwise, a respectful glance is allowable; not a stare, certainly not nudgings and giggles.

A teacher should encourage "good mornings," and "good nights" from every pupil, and the shake of a hand as occasion requires. Other acts of politeness should be taught to pupils at different times, and the teacher should give many profitable and pleasant talks upon this subject.

WHAT IT HAS COST.

One who looks on and does not "see the inside" can scarcely comprehend the fearful work that has been required to bring education to its present condition. The teachers who now are in elegant buildings, supplied with handsome furniture and books, take everything as a matter of course. But "the blood of the martyrs has been the seed of the church" in all ages; the predecessors of the well-paid teachers in this city have been men and women with \$50 as an annual salary! And what shall we say of the conductors of institutes? The writer has slept "three in a bed" and such a bed, and such ventilation! "Let me not speak of it."

Then the writing for educational papers has been done "without recompense or reward." The old *New York Teacher* (which the writer edited for a year gratuitously) paid not only nothing to its "contributing editors," but

they were asked to contribute money as well as articles! And some of them did, it, too; one sent in a check for \$35, as is well remembered.

Many a reader sees articles in his educational journal and supposes the writer is making a snug sum of money when the fact is that it is contributed for the love of the cause. Certain it is, that in the past twenty years, friends of education have stood by the *JOURNAL*, shoulder to shoulder, asking nothing, expecting nothing but the consciousness that they were aiding in a needed movement. A deep debt of gratitude is due these men and women from the entire profession.

We think there is a cessation of labor, but it ought not to be. When men are paid in money for preaching and teaching, then a retrograde movement is certain. "The laborer is worthy of his hire," but the genuine teacher and preacher will never see the money that represents his labor; he must not expect it.

Every teacher should do something for his profession; as those in the past have labored, so must those in the present. We owe it to our profession to advance it in every way possible. One who was at the "Northern Illinois meeting of teachers" says: "I sat there and said, 'Why are these men and women here?'" "Interest in the children," is the reply. It will never do to slacken our interest in the children; the cause of education is the cause of the children.

WE HAVE PROGRESSED.

Those who are not students of educational history are not aware how recently we have emerged from the darkness of the past. The original of Smike, Dickens' character in *Nicholas Nickleby* is still living. His pupil life in the Yorkshire school, which was kept by "Squeers" (Mr. Clarkson), he recently described as follows: "So badly were we treated, that we used to break out at night and rob bean and pea stacks in order to supply our wants and to make up for the deficiencies of the larder at the 'Hall.' Brimstone and treacle was our medicine, and it was administered by 'Mrs. Squeers,' and, a half-day's holiday was always given on the occasion." When he was asked as to what age he was when he ran away from the school, he replied that he was fifteen. When he was old enough to be able to realize his surroundings, there were about forty boys in the school, but at the time he left there were not more than twenty scholars receiving instruction, "the first class in English spelling and philosophy," having become proportionately reduced in numbers. The terms were twenty guineas, which included board, washing and everything, not excepting the "flour of brimstone and molasses," which while purifying the blood, had the additional advantage of being a valuable substitute for breakfast and dinner.

This mode of treatment was not at all uncommon; in fact, the ideal of what a school should be has been realized to but a very limited degree until a little more than a generation ago.

At the Congress of Education convened under the management of the Paris Municipal Council it was decided that public education should have for its object the perfecting of society by all forms of instruction that shall be equally accessible to all pupils, whether rich or poor; that it should have a scientific character, and should employ both experimental and deductive methods of observation. It should also aim at preparing mankind for a better future, and a state of society where inequality, injustice, ignorance, and superstition will more and more disappear. This is a bright dream. In its largest application, education can accomplish this good result, but we must speedily get upon a higher plane than we have yet reached before we can expect to do much towards reaching this Utopia of our anticipations.

This educational conference also decided in favor of mixed schools, in which boys and girls work side by side at the same studies. This is good philosophy, and will soon come to be universal practice.

We receive, from time to time, papers with an educational column. This indicates life on the part of the teacher; we like to get them. But there is a great difference in these columns; some are insufferably bad, being made of scissoreds entirely, and those very badly selected. It is a high art to scissor well. We should like to see in these columns the doings of teachers and pupils. Why don't we find these things?

THE SCIENCE OF METHOD.

AN OUTLINE FOR STUDY IN DEFINITIONS.

A PRINCIPLE.—“A comprehensive statement of a general truth.” “Derived from nothing and can hold nothing.” “Principles have no origin.”—Cicero. “A principle is the primary source from which anything is, becomes, or is known.”—Aristotle.

Our work is to find out principles of knowledge and the laws governing method.

These are of three kinds: (1) Axiomatic. (2) Hypothetic. (3) Definitive. Illustrations are found in geometrical reasoning, also in investigating scientific truths.

Principles also may be divided into two kinds: (1) those that regulate human action, (2) those that prompt human action; the first must be derived from the history of the human race, the second from the nature of the mind.

Our reasoning in studying the science of method must be either *empirical* or *rational*—empirical, when the reasoning is based upon sense perceptions, observations, and experience; rational, when it is based upon the self-activity of the mind and intuitions.

In pursuing this subject we must settle the *sources of knowledge*.

“Knowledge is derived from intuitions and formulated experience, is a relative state of the mind, and resides in the relation of thought and its object.”—Fleming. It implies a *firm belief of the true*, based upon *sufficient grounds*.

The sources of knowledge are, “first, sensations or rather sense-perception (McCosh, “Intuitions,” 287); second, self-consciousness; third, faith.”

“Knowledge, *a posteriori* is knowledge derived from experience.”—Hamilton. “Metaphysics,” 11, 26.

We conclude that knowledge is formulated experience resting upon the basis of intuitions.

“All mental activity is based upon the results of sense-perception, with which it starts.”—DeGarmo.

If we had no senses we could have no mental activity, the mind would remain dormant. The sources of knowledge are from within as well as from without, but the first excitement comes from without. “Perceptions are the synthesis of the nerve excitations with the soul states produced by them.”

Sensation.—“The earliest sign by which the ego becomes perceptible is *corporeal sensation*.”—Fleming.

The excitement commences with the nerve, is carried to the brain, where it touches the incorporeal mind. On the supposition that the mind is material, sensation is a physical phenomena; if it is immaterial, then it is psychical. Sensation as to its origin is physical; as to its action, psychical.

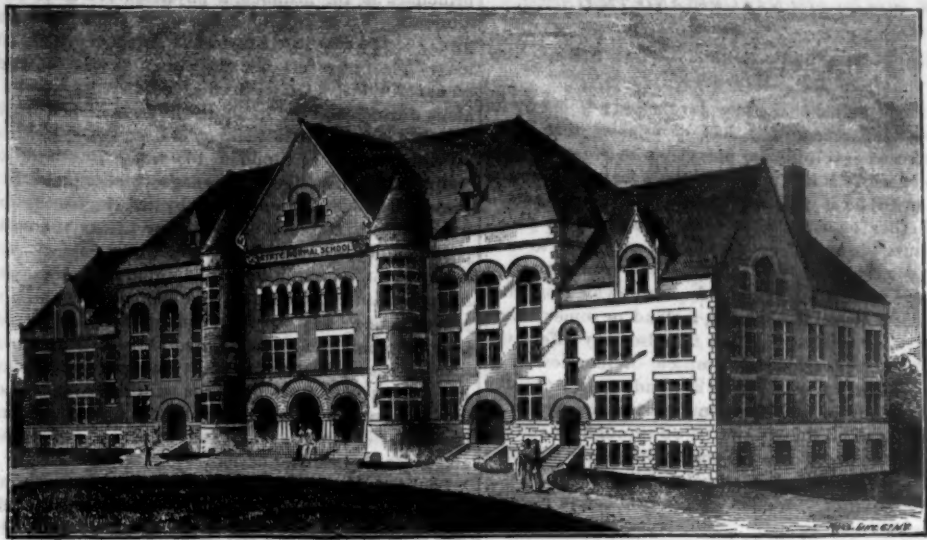
Feeling is a fact, cannot be defined; yet all knowledge rests upon it. Consciousness is knowledge of one thing in relation with another.

Cognition is the act of knowing, and implies comparison—*subjective*, felt; *objective*, seen. It presupposes experience.

REMARK.—If a sensation is a feeling, and a feeling cannot be defined, then a sensation cannot be defined.

THOROUGHNESS.

The other day we read from a circular of a state normal school, the following words: “The main preparation for a teacher is a thorough knowledge of the branches taught.” Perhaps if we had an opportunity of conversing with the principal we should find that his ideal of thoroughness is much more comprehensive than the sentence we quoted would seem to indicate, but from the way the sentence reads we should conclude that his idea of the work of a normal school is extremely narrow. It has often been stated as an incontrovertible proposition, that the knowing of a fact is one thing, and the knowing how to teach that fact is altogether another thing. If this is not a truth, then all our training classes and special normal work is superfluous. We are aware that many eminent college men hold a different doctrine, and claim that the way to learn how to teach is to teach, but a little thought will show how fallacious such a statement is. Analogy proves its falsity, for such a method would not apply to medicine or law. The absurdity of the statement is at once apparent here. Long preparation is needed in order to know how to treat diseases or apply the principles of law. The experience of the world proves that to know a thing does not, by any manner of means, imply the method that should be used in putting another mind into such a relation to the truth that it can comprehend it.



STATE NORMAL SCHOOL, ONEONTA, N. Y.

This fine structure is located in Oneonta, in the beautiful valley of the Susquehanna. It is large and commodious, and is very attractive in its appearance; the lighting, heating, and ventilating are in accordance with the most approved principles. On the ground floor of the building is a large gymnasium fitted with appliances for exercise; this we believe is the only gymnasium in all the normal schools of this state.

There are in all ten normal schools in New York. All except the one at Albany are managed on a general plan: each has the same course of study, and a

local board of trustees of its management. In each there are four courses of study: 1. Elementary English. 2. Advanced English. 3. Scientific. 4. Classical.

The principal is James M. Milne, A.M., Ph.D., well known to the educators of the state; an earnest practical man, fully alive to the opportunities and importance of normal schools.

At this time there is what may be termed a “demand” for normal school training; the time has been when the normal graduate had to run his risk of getting a position, but it is so no longer. The people have tried the normal schools, and now to be a graduate of one is to have a claim on the best positions.

PERCEPTION.

A sensation is not knowledge. Let us see what this means. We smell a rose, but we take no note of its peculiar fragrance. The sensation soon fades away into obscurity, so that after a little time when asked, “Did you smell that rose?” You answer, “Yes, but I know nothing about it.” Why do you know nothing about it? Because the sensation was not definite, it had not been compared, was not distinguished or “localized.” Perception is much more an act of the mind than sensation. For example, a ball made of yarn is felt until its qualities become perceived. The sensation it gives passes from a mere bodily feeling into the higher mind apprehension. It is known to be harder than a ball of cotton, and softer than one of small hempen strings. Its size is noted. In fact, it is compared with other objects; weighed and accurately observed by all the senses that can be brought to bear upon it. The result is, that this ball can be seen as a mental picture; in other words, it has become an object of *perception*. The element of comparison enters into the perception. Suppose an iron ball is lifted and one asks, “How much does it weigh?” At once the mind begins to compare its weight with something else, and the result is an estimate is arrived at, the correctness of which depends upon the accuracy of our comparison. So it is a fact that the objects of perception are *qualities* of material substances. These are resistance, extension, form, color, taste, smell, sound, etc. In fact perception deals with qualities to a great extent. Suppose we wish to get an idea of distance. This is a relation, not a quality, but it is determined by the use of the senses, as sight, touch, hearing, and smelling. Let the young student of psychology try and see if this is not so.

FACULTY DEVELOPMENT.

Nature constantly furnishes the child with object lessons, furnishes the child powers to use these lessons, and so constructs the powers that they gain by exercising them. These three things have long been known. They form the very structure of life expression. Joseph Payne says: “She gives capability of action, and she develops this capability by presenting occasions for its exercise. She makes her pupil learn to do by doing, to live by living. She gives him no grammar of seeing, hearing, etc.; she gives no compendiums of abstract principles. She would stop his progress at the very threshold if she did. Action! action! is her maxim of training; and things! things! are the objects of her lessons.

She adopts much repetition in her teaching; in order that the difficult may become easy, ‘use become a second nature.’ In physical training, ‘use legs and have legs,’ is one of her maxims, and she acts analogously in regard to mental and moral training. She teaches quietly. She does not continually interrupt her pupil, even when he blunders, by outcries and oburgations. She bides her time, and by prompting him to continued action, and inducing him to think about what he is doing, and correct his errors himself, makes his very blunders fruitful in instruction. She does not anxiously intervene to prevent the consequence of his actions; she allows him to experience them, that he may learn prudence; sometimes even letting him burn his fingers, that he may gain at once a significant lesson in physics, and also the moral lesson involved in the ministry of pain.”

Now the teacher is set to unfold faculty, and if he works in accordance with nature, he will be successful. What shall he do? He must not spread his work too widely; what he would do for one he cannot do for fifty. He must plan, then, a certain course. But that must provide conditions for organic growth. There must be freedom of action, for this is essential to natural growth. Nothing so defeats the end of the educator as unnecessary and arbitrary restrictions.

But what shall be the subjects, may be asked? We answer, those that relate to *life*; watch children when they are together, and you will see. LANGUAGE, language, language, that is, expression. DOING, doing, doing—they are always doing. On these two “hang all the law and the prophets.” But the Creator has planned that the child’s doing shall involve pleasure—mark that. Bring, therefore, the child face to face with life in its various forms and manifestations; develop his power of expression concerning these.

Then comes another stage, when he learns from the language of others what he must find expression for.

That is, he hears what others say, or reads what others have done or think, and has materials for expression, for express himself he must; and if there is any living interest whatever, he has joy in expression. Now the selection of the materials here in this stage demands great wisdom. The first stage demands things, the second demands descriptions of things. All of these must be selected with reference to life; so nature says, and the wise teacher follows nature.

We must then learn to look at the school as an institution that is instituted to second nature in her effort to develop the faculties of children; we must criticize the schools with this in mind. The school must aim at development,

THE WILL; ITS NATURE AND TRAINING.

By PROF. J. MCANDREW, Hillhouse High School, New Haven.*

The one principle of the new psychology, which by its discovery and recognition, has done more than anything else to revolutionize old views in regard to the science of man's active powers, is this: that reflex action stands as a type or class to which belong all our activities, whether of body or of brain. In the first place, there must be an *afferent stimulus* conveyed toward some nerve center or cell; then, as the counterpart of this, there must be an *efferent impulse* away from that nerve center or cell to a muscle, a gland, or some portion of the bodily organism. This impulse may effect the contraction or expansion of a muscle or muscles, as in raising the arm; it may excite a gland, as in weeping; or it may send the blood to some particular portion of the body, as in blushing; and so on through an endless variety of effects. Moreover, one and the same stimulus may furnish impulses for a whole series of apparently different activities. A child running about at play, at some sudden and strange sound, stops short, utters a cry, turns pale, bursts into tears, and then runs away. The crying out may be called either a reflex or an instinctive act, the pallor is an evident physical effect, and the bursting into tears is emotional, but all these results are due to the same stimulus.

It is usual to class activities under two heads: voluntary and involuntary. Now, the new psychology pretty clearly demonstrates that no voluntary action can take place which is not made possible by previous involuntary actions. That is to say, the volitions are complex processes, the elements of which are the reflex and instinctive acts of previous experience. Just as it is an utter impossibility for the imagination to conjure up a picture, no element of which ever existed in the mind, or, for the reason to develop a conclusion without assuming premises, so no volitional activity can take place unless the elements of that activity have first been experienced involuntarily. Which of us even by taking thought can add a cubit to his stature? How would one go to work to make his hair stand on end, or to wag his ears? We could do these things, if they had occurred often enough, of themselves, to give us an idea of how they take place. But without some conception of how such actions would feel, or what their concomitants are, they are no more possible than to fly in mid-air, or to speak in Russian without any knowledge of the language.

The will is not a force which can control *directly* the muscles, sinews, nerves, or glands concerned in any given action. The only thing to which it can possibly apply itself is the *idea* or *presentation* of the activity. The idea of the action once before the mind, the automatic mechanism executes the remainder of the task, so that, in a sense, all our actions are automatically performed. Who of us when bathing at the seashore, has not at first stood shivering at the edge of the water, harboring all sorts of ideas interdictory to that of taking the cold plunge? At last an unhindered conception of the effort to be made comes before the mind, and, lo! we are in the water without knowing how. Then, it follows that an office of the will is to cause the persistence, the prolongation, or the intensity of ideas. The automatic bodily machinery is the willing and prompt servant, not directly of the will or of the feelings, but of the idea or presentation which it is the office of the will or the feelings to emphasize. The fact that an insane man cannot escape the physical effects of his unreasonable and eccentric thoughts, causes insanity to be regarded as the most terrible of maladies.

In order to make any desired action possible, the will must perform another office, that of inhibiting those mind-images, not necessary to the desired action, constantly occurring in thought. Now, habit is simply the tendency through repetition or inherited disposition for one thought or succession of thoughts to occur to and take possession of the mind. The mental picture of a bottle and a glass leads the drunkard into the wine-shop or saloon before he is aware what has taken place. The difficulty in conquering any bad habit is in getting rid of the mind-images which have produced and constituted that bad habit. Nothing so effectually checks any passion or frenzied act as to harbor the thoughts of other things. On this principle, a mother often stops the crying of a child by directing the attention toward some attractive object.

The training of the will must proceed under the same

principles as, for instance, a physician remedies bodily ailments. All he can do is to supply the proper remedies, and the conditions favorable to recovery. Then he leaves nature to work out the cure. It was the theory of our forefathers that a child needed only to be left alone during the first six or seven years of his life, and then a course of treatment called an education might advantageously be applied to him. But the well-equipped and intelligently managed kindergarten of the present day has demonstrated by its results the great importance to the child in all after life of the earliest possible development of both the bodily and the sense activities. The definite and appropriate processes of manual training, sloyd, tool and shop work, to a greater extent than by any other known methods, are fitted to lay the foundation for elaborated ideas of doing, and to give aptitude in their combination and specialization. For the purpose of training the will, a hearty welcome into our school systems should be given to manual training, the kindergarten, and whatever else develops and gives control over action.

The end to be attained in training the voluntary activities is to acquire the habitual power of holding steadily before the mind appropriate and worthy ideas. The real hero, the truly great man, is he who can subdue not the physical world, but the world of ideas; who from the fortress of his soul can expel whatever offends, and admit all things which enrich, strengthen, and ennoble his immortal life.

JOHN BRIGHT ON EDUCATION.

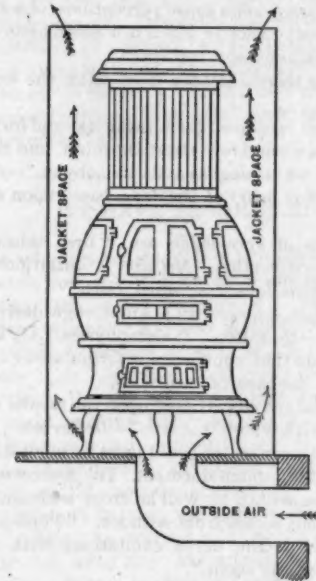
"Education is not even classics and mathematics, of which, in my day, when I was young, I knew nothing, and of which I have not acquired any knowledge since. I regard what are called classics, that is, the ancient languages of Greece and Rome, as rather luxuries than anything else. I do not myself believe that there is anything in the way of wisdom which is to be attained in any of the old languages which at this moment may not be equally attained in books of our own literature. Therefore I think a man may be as great, as good, and as wise a man, knowing only his own language and the wisdom that is enshrined in it, as if he knew all the Latin and Greek books that have ever been written. I think with regard to teachers they have two entirely different branches of labor. They have that of instructing their pupils from books, and they have that of instructing them from their own conduct and their own manners. You want to teach a child to be gentle—and I must say that is better than book learning—not the gentleness that is weakness, for there is perfect gentleness which is combined with great force. You want gentleness, you want humanity. Humanity to animals is one point. If I were a teacher of a school I would make it a very important part of my business to imbue every boy and girl with the duty of being kind to all animals. It is impossible to say how much evil there is in the world from barbarity and unkindness which people show to what we call the inferior creatures. Then there is the quality of unselfishness. Selfishness in families is the cause of misery and the cause of great injustice. Unselfishness and a love of justice—these are qualities which come if you offer them to the young person's mind. By their very nature they cannot receive them except with liking and approbation. And I have no doubt that it is possible for the teachers in the elementary schools during the next ten years or so, during which they will have two or three generations of children under their care, so to impress their minds on these subjects that twenty years hence it will be seen and felt over the whole country that there is an improvement in these respects in the general population. These are things which, I think, it behooves the teachers in these schools to bear in mind. They cannot possibly have too high a sense of the responsibilities of their position and of their duties."

It is the vim and ambition which pervade every individual in this nation of ours that make the term "Yankee" synonymous with energy, perseverance, and success, and that have given our people their position among the civilized nations of the world. A man that is imbued with ambition will make the better man, no matter what may be his position in society, and one that is thoroughly contented is but a stumbling block in the way of progressing humanity. It is not ambition that is to blame that the lives of so many men are failures, but the perverted sentiment that counts honest toil of the hands dishonorable and drives men to seek employment in the more fashionable vocations of the law,

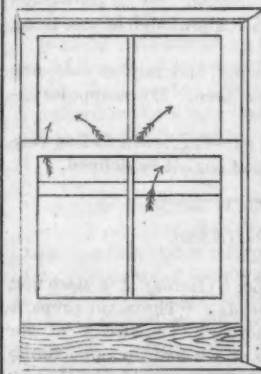
medicine, or theology. It is because men do not follow their own inclinations, but are influenced by the verdict of society, in the choice of a vocation, that they fail. Society's criterion of an honorable man is his occupation, not the man himself.—PROF. F. A. E. STARR.

VENTILATION MOST IMPORTANT.

No one can educate children in foul air. The listlessness, misbehavior, idleness, etc., so often seen in the school-room, arise from the foul atmosphere in which they are. To have pure air is one of the things the teacher is there for. We give below, one means by which when the stove is in operation some pure air may be brought into the room. A six-inch hole is made in the floor, and from this a stove-pipe leads to the outside of the building. Around the stove is placed a zinc cylinder. This cylinder may be made so that a part of it will swing like a door.



The windows may be made so that air will come in steadily. By raising the windows four or six inches, and putting a board underneath, the air will come in between the sashes. This will need care and attention in very cold weather, so that a stream of chilly air will not pour on the pupils' heads. Foul air kills slowly; cold air kills at once.



The doors and windows must be used for ventilation. At the end of every recitation the door can be thrown open and some fresh air admitted. Let the pupils march round the room singing, while the doors and windows are thrown open; if necessary, let the girls put shawls on. If the teacher has gymnastics, then is the time to open the doors and windows.

Another excellent plan is to tack cheese-cloth up on the outside so as to cover the lower sash; then on raising the lower sash the air comes in so slowly as not to chill those near by.

The teacher should see that the floor of the room is warmed. Let a thermometer be put at the bottom of the room and then at the top, and note the difference. Every effort must be made to make the floor tight, for nothing is more injurious than studying with cold feet. We have known of cases where the school officers put in a new floor over the old one. Putting tar-paper between them would be very serviceable.

The teacher should have a thermometer, and use it; the pupils should be taught to use it. It is not safe to sit in a room much below 65°—the regulation temperature for school-rooms is 68°. Then again the school-room must not be allowed to get too hot; a temperature much over 70° is injurious.

Let a pupil be appointed to record the temperature in a book several times each day; if it is below 65° the trustees can see that something must be done.

* From a recent paper before the Connecticut state teachers' association.

THE SCHOOL ROOM.

The subjects for discussion this week are "EARTH and NUMBERS." Under each will be found valuable suggestions for the earnest teacher.

PROBLEMS IN PROPORTION.

By PROF. WM. NOETLING, Bloomsburg, Pa.

The problems usually classed under proportion (simple and compound) in books on arithmetic can, without difficulty, be taught to pupils thirteen to fourteen years of age, by the analytic method. The writer of this has taught them by this method for more than a quarter of a century. He has also taught percentage, interest, true and bank discount by the same mode of analysis, and thus not only given his pupils a better knowledge of these subjects than is usually obtained from the methods of the text-books, but materially shortened the time generally required for comprehending them.

To teach these subjects successfully, it is necessary to begin with short, easy problems, and to increase them in length and difficulty at the same rate as the power of comprehension of the pupils develops.

The object of this article is to show how easily compound proportion problems can be solved by analysis; and, further, that as many problems can be made of each one as it has terms.

Problem 1.—If in 9 days of 8 hours each, 20 men can build a wall 40 feet long, 2 feet thick, and 6 feet high, how many men can build a similar wall 60 feet long, 3 feet thick, and 5 feet high, in 15 days of 12 hours each?

Statement of Conditions.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
20	9	8	40	2	6
?	15	12	60	3	5

Statement of Analysis. $20 \times \frac{15}{9} \times \frac{12}{8} \times \frac{60}{40} \times \frac{2}{3} \times \frac{5}{6} = 15$.

Analysis or explanation.—The first term is the number that is of the same kind as the one required. Since the work can be done in 9 days by 20 men, it can be done by 9 times as many in 1 day, and in 15 days by $\frac{15}{9}$ as many as in 1 day; that is, if they work 8 hours a day, but if they work only 1 hour a day it will require 8 times as many men as if they work 8 hours, and if they work 12 hours a day, $\frac{12}{8}$ as many as if they work 1 hour; that is, if they make the wall 40 feet long, but if they make it 1 foot long it will require only $\frac{1}{40}$ as many men as if they make it 40 feet long, and 60 feet long will require 60 times as many men as 1 foot long; that is, provided they make it 2 feet thick, but if they make it 1 foot thick it will require only $\frac{1}{2}$ as many men as if they make it 2 feet thick, and 3 feet thick will require 3 times as many men as 1 foot thick; that is, if they make it 6 feet high, but 1 foot high will require only $\frac{1}{6}$ as many men as 6 feet high, and 5 feet high 5 times as many as 1 foot.

Problem 2.—If in 15 days of 12 hours each, 15 men can build a wall 60 feet long, 3 feet thick, and 5 feet high, how many men can build a similar wall, 40 feet long, 2 feet thick, and 6 feet high, in 9 days of 8 hours each?

Statement of Conditions.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
15	15	12	60	3	5
?	9	8	40	2	6

Statement of Analysis. $15 \times \frac{9}{15} \times \frac{8}{12} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 20$.

It is not believed necessary to give a full analysis of more than the first problem.

Of the remaining ten problems made from the first of the foregoing, only the statements of the conditions and of the analysis, will be given.

Problem 3.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
20	9	8	40	2	6
15	?	12	60	3	5

$20 \times \frac{15}{9} \times \frac{12}{8} \times \frac{60}{40} \times \frac{2}{3} \times \frac{5}{6} = 15$.

Problem 4.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
15	15	12	60	3	5
20	?	8	40	2	6

$15 \times \frac{20}{15} \times \frac{8}{12} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 9$.

Problem 5.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
20	9	8	40	2	6
15	15	?	60	3	5

$20 \times \frac{15}{9} \times \frac{12}{8} \times \frac{60}{40} \times \frac{2}{3} \times \frac{5}{6} = 12$.

Problem 6.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
15	15	12	60	3	5
20	?	8	40	2	6

$15 \times \frac{20}{15} \times \frac{8}{12} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 8$.

Problem 7.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
20	9	8	40	2	6
15	15	12	?	3	5

$15 \times \frac{20}{9} \times \frac{12}{8} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 60$.

Problem 8.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
15	15	12	60	3	5
20	?	8	40	2	6

$15 \times \frac{20}{15} \times \frac{8}{12} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 40$.

Problem 9.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
20	9	8	40	2	6
15	15	12	60	?	5

$20 \times \frac{15}{9} \times \frac{12}{8} \times \frac{60}{40} \times \frac{2}{3} \times \frac{5}{6} = 3$.

Problem 10.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
15	15	12	60	3	5
20	?	8	40	2	6

$15 \times \frac{20}{15} \times \frac{8}{12} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 2$.

Problem 11.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
20	9	8	40	2	6
15	15	12	60	3	5

$20 \times \frac{15}{9} \times \frac{12}{8} \times \frac{60}{40} \times \frac{2}{3} \times \frac{5}{6} = 5$.

Problem 12.

M.	d.	hrs.	ft. l.	ft. th.	ft. h.
15	15	12	60	3	5
20	9	8	40	2	6

$15 \times \frac{20}{9} \times \frac{8}{12} \times \frac{40}{60} \times \frac{2}{3} \times \frac{6}{5} = 6$.

Until pupils have a good knowledge of the solution of problems by the foregoing method of analysis, they should be required to write out a statement of the conditions of every problem, before they try to analyze it. Their ability to do so will indicate their knowledge of the conditions. They should also, at first, be shown that the units must invariably be taken in the horizontal line of the statement of the conditions in which all the numbers are given; and that their reasoning must all tend towards the thing required.

LINEAR MEASURE.

By WILLIAM M. GIFFIN, Cook County Normal School.

How we pity that thought producing, much neglected, but all-important subject, linear measure. Who ever saw a text-book that did much more for it than the following:

How many inches in $4\frac{1}{2}$ feet?
 " " " " $3\frac{1}{2}$ feet?
 " " " " 2 yards?
 " " feet " 3 rods?

etc., etc., etc.

We have been much interested in this subject for a few days. We have found out how many feet of railroad iron it would take to build a railroad five miles long. To be sure, some of us were going to run our cars on one rail, but then a little thought fixed that all right. Again, we found out how many yards of carpet it would take to carpet a stair 12 steps high, each step having a raise of 4 inches, and being 8 inches wide. Of course, some of us found the square yards, but then a little more thinking helped us out again. Next we found how many feet of molding it will take to go around a room 18 by 25 feet, and how many yards of picture wire we must buy to hang 8 pictures if each picture requires six feet. But, perhaps the best, i. e., the most thoughtful exercise we had was the following, which every bright boy, ten or twelve years old, can think out if he will only give his attention to it and, which he cannot do, unless he does concentrate his mind upon it, viz.:

I have a square lot, at each corner of which I dig a post-hole. Then, beginning at the northwest corner, I dig on the north side, six post-holes, 8 feet apart, the last hole being four feet from the northeast corner. Beginning at the same point again, I dig as before, the same number of holes on the west side. Next I begin at the north-east corner and dig the same number of holes, the same distance apart on the east side.

On these three sides of the lot I build a fence 12 boards high, using 8-foot boards.

On the west side of the lot beginning in the north-west corner I build three pens, the north and south sides of each pen being 16 feet long and the east and west side of each being 8 feet wide. The pens are 8 feet apart, and the south half of each east end is left open.

On the east side of the lot beginning in the north-east corner, I build three pens the same as the others, with this difference: the north and south sides are each 12 feet long, and the east and west ends are 8 feet wide, but the south half of the west end of each pen is left open. The sides and ends of the pens, excepting those sides and ends formed by the fence, are to be 4 boards high.

How many 8-foot boards will it take to build the fence and pens, and what will the required number of posts cost at 25 cents each?

At first there were many different answers, but any one giving more or less than 316 boards, or more or less than \$12, was sent to the board to draw his plan and prove his work. Each did prove, not his answer, but his faulty reasoning, and returned to his seat, wiser and stronger, and may we not say, better than when he left it?

Here, you see, we had a language lesson (the dictation), a drawing lesson (the plan), and a test in arithmetic (the problem), all in one, and when giving the lesson we remembered with White: "Whatever knowledge is taught a child should be so taught that the act of acquiring it shall be of greater value than the knowledge itself."

INDUCTIVE METHOD WITH DECIMALS.

By PARS. N. E. LUGENBEEL, Normal College, Mitchell, Md.

Perform the following work on the board before the class, requiring all to place the same on their slates or in note books:

$\frac{5}{10} = .5$ by erasing the cipher, the horizontal line and the part of the 1 below the horizontal line leaving the top for the decimal point.

$\frac{25}{100} = .25$

$\frac{3}{100} = \frac{3}{100} = .03$

$\frac{25}{1000} = \frac{25}{1000} = .025$

$\frac{5}{1000} = \frac{5}{1000} = .005$

by same process.

After this has been performed by all the pupils ask questions similar to the following, in order to call attention to the facts developed.

(1) What form of fraction have we found the decimal to be?

Ans.—The decimal is a fraction with an erased denominator.

(2) What does the decimal point represent as shown by this process?

Ans.—It represents the 1 in the erased denominator.

(3) The number of decimal places has what relation to the number of ciphers in the erased denominator?

Ans.—It always equals the number of ciphers in the unexpressed denominator.

(4) Then how is the unexpressed denominator of a decimal represented?

Ans.—It is indicated by the decimal point and the number of decimal places.

(5) What are the numerators of the decimals .5, .25, .03, .025, and .005?

Ans.—5, 25, 3, 25, and 5.

The pupil will now be able to define a decimal fraction. He will probably describe it in the following manner:

A decimal is a fraction of which the unexpressed denominator is 1, represented by the point, with as many ciphers as the number contains decimal places.

With such a knowledge of the form and structure of a decimal, the following method of writing decimals may also be developed.

Write the numerator as in common fractions; point off as many decimal places as there are ciphers in the unexpressed denominator.

BRIEF HINTS.

Oral and written arithmetic should be combined and taught at the same recitation. While a part of the A class are solving the more complex problems on the blackboard, others should be engaged in oral analysis, for which some of the examples in the book may be suitable: if not the teacher must construct problems for the occasion. Those at the board having finished their work, each is called upon, in turn, to give a logical analysis of his problem. The oral and written work should be criticised, first by its author, next by the class, and lastly by the teacher.

Reviews should be frequent. At least one problem made by the teacher, or selected from a book not used by the class, should be given in review at each recitation. Each one works it rapidly on his slate and rises. All finish and rise, and the teacher calls upon one who reads his answer and sits down. All who have the same answer sit down. And another, still standing, is called upon, and so on, until all are seated. This takes but a minute. Great pains should be taken in the selection or construction of a problem. The live teacher has a pair of philosopher's scales in his room, and puts the capacity of the class in the dish at one end, and at the other a problem, which he modifies until the two hang on even scale.

Two things are necessary in training mind. There must be something to call mind into play; and there must be teaching skill to enable the mind to profit by its exercise. That is to say, there must be a familiar subject rich in intelligent difficulties; and there must be intelligent skill to turn those difficulties to account—to give an example.—THIRING.

THE EARTH.

GEOGRAPHY BY OBJECTIVE METHODS.

BY AMOS M. KELLOGG.

[CONTINUED FROM SCHOOL JOURNAL, OCTOBER 12.]

REVIEWS.—Assigning Pennsylvania for desk work, the teacher then turns to deepen and extend the impressions made at former lessons.

ILLINOIS; ITS PRODUCTS.—A drawer is labeled *Illinois*, and to certain pupils is assigned the duty of illustrating the state by collecting products of the state, as wheat, corn, leaves, dried flowers, minerals, etc., etc. See Ohio for details respecting this.

ILLINOIS; RELATION OF LIFE TO THE STATE.—The question will be proposed, "How do people live in the state of Illinois?" All the class (teacher too) will join in the search for information. Letters from residents will be got, and information from those who have visited the state; the text-book and the cyclopedia will be referred to.

CAUTION.—The teacher must not scatter his researches too widely; there is danger here. Let him confine his attention to a few subjects. If a former resident of the state comes before the class, bring up the questions before the class that are to be asked, and have them written out. They should be concerning the soil, climate, products, occupations, prosperity of the people, schools, churches, character of the people, etc.

The answers to these questions should be taken down, dated, signed by the "secretary," and filed away in the "Illinois" drawer. A similar course should be pursued with all of the states.

Some general suggestions.—Five states have been brought before the class; three have been studied somewhat (only somewhat) carefully. If the teacher has gone to work aright he will have aroused a great spirit of industry and investigation. To direct this mighty current properly will now demand the highest pedagogical skill.

PLAN FOR A THIRTY-MINUTE RECITATION.

1. **Five minutes.**—The teacher draws the state assigned for the day, and assigns the same for desk work. This is the new work.
2. **Ten minutes.**—The pupils draw states previously studied; criticisms follow.
3. **Ten minutes.**—A "talk" about a state by the teacher or by the pupils, discussions, explanations, etc.
- The "talk" by the teacher will only occur weekly perhaps, while the pupils will talk every day.
4. **Five minutes.**—This may be devoted to miscellaneous matter; the accumulations in the drawer reported on, etc.

While the pupils are drawing maps, the teacher may question those at their seats, and thus economize time.

LESSON XVI.

REVIEWS.—Let the teacher draw all the states thus far studied, beginning with Ohio. Then he assigns pupils to

1. Draw Ohio and Pennsylvania.
2. Draw Ohio and Michigan.
3. Draw Indiana and Michigan.
4. Draw Ohio and Indiana.
5. Draw Indiana and Illinois.
6. Draw Ohio, Pennsylvania, and Indiana.
7. Draw Ohio, Pennsylvania, Indiana, and Illinois.

It is a good idea to keep up the plan of calling for volunteers. "Who can draw Ohio and Pennsylvania?" From the number who raise their hands, select according to judgment. If five minutes is fixed upon for the drawing, at the end of that time let all stop. Those who do not complete their maps, will be made to feel the need of more desk work.

A TALK ABOUT MICHIGAN.—If there is promptness in the drawing of the above maps, the teacher can take up this topic for the remainder of the recitation.

MICHIGAN, ITS PRODUCTS.—This will be assigned as a subject to be studied. (See Ohio, Illinois, etc.)

Several lessons may be needed on Pennsylvania, and on reviews of other states; certainly the teacher should not go on until every pupil can draw and describe the states already studied with freedom, (not fullness); that they never will attain to.

A TALK ABOUT PENNSYLVANIA.—At the proper time the teacher will give an interesting talk about Pennsylvania. The rivers, the cities, the early history, William Penn, the coal, the iron, the mountains, etc., will furnish subjects.

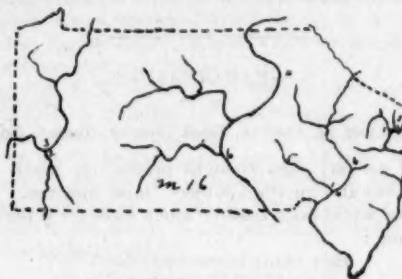
PRODUCTS OF PENNSYLVANIA.—This subject will be

taken up as indicated in the case of Ohio. It need not, however, be taken up at this point; see suggestions for recitations in Lesson 15. The plan is as stated in the preface, to add to the knowledge of a state, day by day, week by week, month by month; to incorporate this knowledge with what has been previously acquired by reviews. So that the "talk" upon Pennsylvania may not take place until some days after the map of Pennsylvania is first placed by the teacher on the blackboard. There will be a drawer set apart for this state, of course.

LESSON XVII.

The teacher draws Pennsylvania, and then annexes New Jersey; the names of the boundaries, rivers, and cities are given; the pupils repeat them, and as they are written on the blackboard copy them.

[Map 16.]



The cities of New Jersey are, 1 Newark, 2 Jersey City, 3 Paterson, 4 Camden, 5 Hoboken, 6 Trenton, the capital.

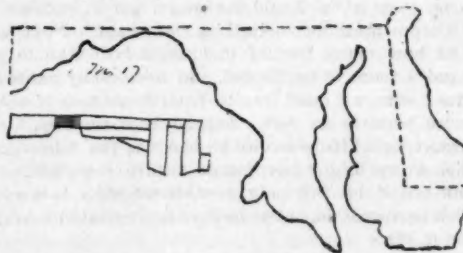
COMPARISON.—New Jersey extends below Pennsylvania as much as Pennsylvania extends above New Jersey.

PROPORTION.—New Jersey is nearly four times as long as wide.

The same course is then pursued as with the other states.

LESSON XVIII.

The teacher draws Maryland and Delaware, merely in outline. [Map 17.]



To say that the former resembles a monkey-wrench and the latter a shoe with its toe pressed into Pennsylvania, will help the memory wonderfully.

Having given a clear idea of the form of Maryland, the cities, 1 Baltimore, 2 Frederick, 3 Annapolis, the capital, are placed.

In Delaware, 1 Wilmington, 2 Dover, are located.

PROPORTION.—The width of Maryland is about $\frac{1}{4}$ of its upper boundary. Its northern boundary is $\frac{1}{2}$ of the southern boundary of Pennsylvania. Its thin part comes under the center of Pennsylvania's straight southern boundary.

1. Ohio maps are then assigned to pupils.
2. Ohio and Pennsylvania.
3. Ohio, Pennsylvania, and New Jersey.
4. Pennsylvania, New Jersey, Maryland, and Delaware.

LESSON XIX.

KENTUCKY.—The teacher begins with Ohio, then adds Indiana, then Illinois, then extending the Mississippi river he draws the southern boundary of Kentucky, then puts in the Big Sandy river and the Cumberland mountains.

He draws the Tennessee, Cumberland, Green, Kentucky, and Licking rivers, and locates the cities, 1 Louisville, 2 Newport, 3 Lexington, 4 Paducah, 5 Frankfort, the capital.

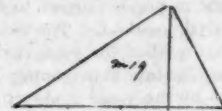
PROPORTION.—The length of the southern boundary of Kentucky is twice its greatest width.

The shape of Kentucky is that of a shoe. [Map 18.]

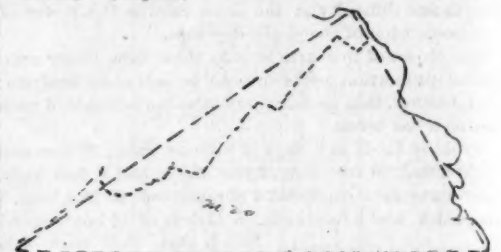


As the southern boundary of Kentucky is a very important line it is well to remember it is below Cincinnati the length of Ohio's western boundary. That is, we double Ohio's western boundary southward from Ohio's northern boundary to find it.

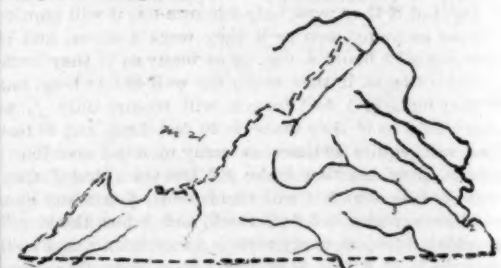
VIRGINIA.—Let the teachers draw a triangle thus: First draw a line, say a foot long, and divide it into four parts. At the first point erect a perpendicular half as long as the bottom line. Sketch in the other two sides of the triangle. (Map 19.)



As Virginia is a difficult state to draw, repeat this until the proportions are fixed. With this triangle on the blackboard, sketch in the east and west boundaries. Point out the three steps and semicircle in the western boundary. (Map 20.)



When this is firm in the memory complete the map; place the rivers Rappahannock, York, James, and Shenandoah; and the cities, 1, Richmond (the capital); 2, Norfolk; 3, Petersburg; 4, Lynchburg; 5, Alexandria; and 6, Portsmouth. (The Shenandoah river enters the Potomac about half way in the southern boundary of Maryland. Map 21.)

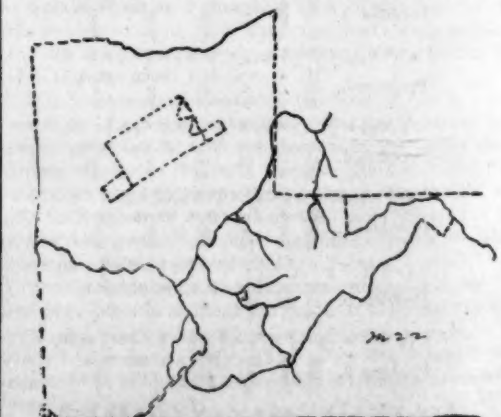


REVIEW.—This map will need to be drawn again and again. It is easier to get an idea of Virginia from its connection with Maryland, West Virginia, Ohio, Kentucky, and Delaware, than when alone, but this plan will give its shape. Impress the fact that it is a triangle.

THE "TALK."—After the form of Virginia is familiar begin with a "talk," for it must be noticed that a talk helps to fix the form of the map, and the map, again, locating the incidents, fixes them firmly in the memory. Virginia is a grand state for "talks;" its history, its great men, its battle-fields, etc., give it an imperishable fame. The teacher should make much of this state.

LESSON XX.

The teacher begins with Ohio, and adds Pennsylvania; then the Big Sandy river, the western boundary of Kentucky, and the southern boundary of Virginia. To get this he extends Ohio, western boundary, by its own length, as has been shown. Out of this he cuts Maryland, Delaware, Virginia, and West Virginia. (Map 22.)



Note the three steps and a semicircle in the eastern boundary of West Virginia.

[TO BE CONTINUED.]

MOUNTAINS.

By CLARENCE S. GIFFIN, Newark, New Jersey.

The method employed in the following exercise on mountains may also be employed on other subjects. I have used it with success in grammar school and the higher primary classes.

Suppose, for illustration, the class is commencing the study of North America. After a general study of the continent, and attention has been called to the surface, drainage, cities, etc., let the teacher give out as a lesson the mountains of North America. Tell the scholars they are to find out all they can about them, by a study of the map, by reading the text, or by any other means they may have. If possible place at their disposal a number of geographies, different from their own, and encourage them to find out what they can about the mountains from these books. The next day call upon different ones—all, if the class is not too large, to go to the blackboard and write a sentence telling something they have learned about the mountains of North America. One may write:—The Mountains of North America are divided into two great systems. Another:—These two systems are found, the one in the eastern and the other in the western part. And a third may say:—Those in the western part are called the Rocky mountains, and are higher than those of the eastern part, etc. When you have obtained a sufficient number of these sentences, have them read aloud and corrected by the class, as regards the use of capital letters, spelling, punctuation, etc., having the writer correct his or her own sentence at the dictation of the rest of the class. Then have each member of the class take a slate or paper, and write a composition or description about the mountains of North America, using the information given in the sentences already written and corrected. Have these read, commending the best ones, and carefully pointing out the faults of the others, arising from poor arrangement, a disposition to short sentences, etc. The same process may be employed in a study of the rivers, the cities, the people, etc. By so doing we have combined a lesson in geography, spelling, writing, language, neatness, and punctuation. We have stimulated a desire for information outside of the regular text-book. Have cultivated their observation and encouraged them to find out truths for themselves, and not be dependent upon the teacher, or one single book, for their information. They have been stimulated to ascertain truths and express them to you in their own language, without committing to memory the mere words of their books. It is a study of ideas, not of words.

QUESTIONS.

1. From what country or countries do these come: (1) coffee, (2) tea, (3) cocoa, (4) sugar, (5) pepper, (6) rice?
2. Which is farther north London or Chicago? Rome or Washington? San Francisco or St. Louis? Boston or Denver? Paris or New York?
3. Should you travel directly south, what part of South America would you reach?
4. Name the countries upon which the sun's rays now fall perpendicularly?
5. What effect has this falling perpendicularly?
6. Which is the largest city having south latitude?
7. Are the days and nights now of equal length on any part of the earth's surface?
8. In which direction do shadows now fall at noon in Buenos Ayres?
9. What meridians are employed by the railroads of our country in establishing the standard time?

OBJECTIVE METHODS.

First, we modeled in sand the Scandinavian peninsula, Iceland, Greenland, and Eastern coast of North America; on Norway, stuck a tooth-pick on which was gummed a piece of colored paper with the name "Biarn" written on it, to represent a flag; on Iceland, two tooth-picks with flags, "Eric the Red" written on one, and "Leif," on the other. The tooth-picks represented boats, and the pupers the men. First, we moved the tooth-picks from Iceland to Greenland to show that Eric the Red discovered Greenland, and lived there with his family, thereafter; next, explained how Leif made known the discovery to the king of Norway, etc., and how, later on, Biarn on a trading voyage to Greenland, landed on the eastern coast of North America, being blown there by a heavy wind. (Ask children from which direction the wind must have been blowing.) Of course, to

illustrate Biarn's voyage we moved the tooth-pick with Biarn's name. We moved the boats in this manner, until the whole history of those voyages was illustrated. On the paper with the name may be written the date of the discovery. All discoveries and settlements can be illustrated in like manner. History should never be taught without a map or model, where every child can see it.

Children as young as six, enjoy history and geography when taught in this manner. The products of countries can be taught in like manner by fastening the product, or a picture of it, into the sand.

Of course, teachers must work and think to plan such lessons; but the children's intelligent and radiant faces repay it all with interest.

Besides Frye's "Child and Nature" I find "The Quincy Methods," by Patridge, a great suggestor.

A. Y.

VOYAGES.

By E. R. SHAW, Principal High School, Yonkers, N. Y.

Let the teacher clip such advertisements as the following from New York newspapers, or from this paper, post them up where they can be read by the geography class, and direct the pupils to find the places mentioned and trace the routes:

THE U. S. AND BRAZIL MAIL SS. CO.

American passenger line for St. Thomas, Barbados, Para, Maranhão, Ceará, and Pernambuco.
Steamship BONAVISTA, Wednesday, February 16, at 4 p.m.
For St. Thomas, Barbados, Para, Maranhão, Pernambuco, Bahia, Rio de Janeiro, and Santos, connecting for Montevideo and way ports.
Steamship ALLIANCA, Wednesday, February 23, at 4 p.m.
From Newport News, Va., third day after at 7 p.m.

RED "D" LINE OF STEAMSHIPS

FOR LAGUAYRA, PUERTO CABELLO, CURACOA, AND MARACAIBO.
From pier 36 East River.
VALENCIA.....Thursday, February 17
PHILADELPHIA.....Wednesday, March 2
CARACAS.....Saturday, March 12

COMPANIA TRASATLANTICA ESPANOLA.

The steamers of this well-known Spanish steamship line, now under contract with the Mexican Government, will leave New York for Havana, direct on the 4th, 14th, and 24th of every month.
The first-class steamship MEXICO will sail February 14, for Havana, Santiago de Cuba, Progreso, Vera Cruz, Cartagena, Savanilla, Colon, Cadix, and Barcelona.

UNITED STATES MAIL SS. CO.

TRI-WEEKLY BETWEEN TAMPA AND HAVANA.
THREE DAYS FROM NEW YORK TO HAVANA.
A ship of the Plant steamship line will leave Tampa on Tuesdays, Thursdays, and Saturdays on arrival of fast mail train from New York, reaching Key West next afternoon, and Havana the following morning.

OCEANIC STEAMSHIP CO.

FROM SAN FRANCISCO TO AUCKLAND, N. Z., AND SYDNEY DIRECT.
calling at Honolulu, carrying the United States and Royal mails. Steamers leave San Francisco as follows:—
ZEALANDIA.....Saturday, March 12, 1887
and every fourth Saturday thereafter. Through tickets issued to all chief points in New Zealand and Australia.

FOR JACKSONVILLE, FERNANDINA, AND ALL FLORIDA PORTS, CALLING AT CHARLESTON, NEW YORK, CHARLESTON AND FLORIDA STEAMSHIP LINES.

Steamers from pier 29 East River, tri-weekly.
Tuesdays and Thursdays ships go to Fernandina, Fla., connecting with F. R. and N. Co. for Jacksonville and all interior points.

OLD DOMINION STEAMSHIP COMPANY.

FOR NORFOLK, RICHMOND, AND PETERSBURG, VA., TUESDAY, THURSDAY, AND SATURDAY.
FOR NEWPORT NEWS AND WEST POINT, VA., MONDAY, WEDNESDAY, THURSDAY, AND SATURDAY.

1. Let the pupils find the places mentioned and describe them, briefly.
2. Let them state why these steamers go to these places.
3. Let them state what freight these steamers will probably carry and bring.

THE STATES.

THE PRINCIPAL PRODUCTS OF EACH.

Alabama ranks fourth in cotton; becoming prominent in iron and steel.
Arizona ranks second in silver; first in deserts.
California ranks first in barley, grape culture, sheep, gold, and quicksilver.
Colorado ranks first in silver.
Connecticut ranks first in clocks, and variety of manufactured articles.
Delaware is way up in peaches.
Dakota is the finest wheat-growing state.
Florida ranks third in sugar and molasses; first in tropical fruits.
Georgia ranks second in rice and sweet potatoes.
Indiana ranks second in wheat.

Illinois ranks first in oats, meat packing, lumber traffic, malt and distilled liquors, and miles of railway.
Iowa ranks first in average intelligence of population, first in production of corn, and first in number of swine.
Idaho ranks sixth in gold and silver.

Kansas ranks fifth in cattle, corn, and rye.
Kentucky ranks first in tobacco, and has a world-wide reputation for thoroughbred horses and cattle.

Louisiana ranks first in sugar and molasses.
Maine ranks first in ship-building, slate and granite quarries, lumbering and fishing.

Maryland ranks fourth in coal.
Massachusetts ranks first in cotton, woolen and worsted goods, and in cod and mackerel fishing.

Michigan ranks first in copper, lumber, and salt.
Minnesota ranks fourth in wheat and barley.

Mississippi ranks second in cotton.
Missouri ranks first in mules.

Montana ranks fifth in silver and gold.
New York ranks first in value of manufactures, soap, printing and publishing, hops, hay, potatoes, buck-wheat, and milch cows.

North Carolina ranks first in tar and turpentine.
New Jersey is first in trucking and peaches.

Ohio ranks first in agricultural implements and wool.
Oregon takes the palm in cattle-raising.

Pennsylvania ranks first in rye, iron and steel, petroleum, and coal.

Rhode Island, in proportion to its size, outranks all other states in value of manufactures.

South Carolina ranks first in phosphates.
Tennessee ranks second in peanuts.

Texas ranks first in cattle and cotton.
Utah ranks third in silver.

Vermont ranks fourth in copper, and first in maple sugar.

Virginia ranks first in peanuts.
West Virginia ranks fifth in salt and coal.

Wisconsin ranks second in hops.
Washington is first in forests.

THINGS TO TELL PUPILS.

ABOUT THE EARTH.

PEDROS PINTADORES: OR, PAINTED ROCKS OF ARIZONA.—These tumbled-up rocks look as though an earthquake had been around tossing things up generally; but an earthquake could not paint pictures. And so we know that at some time men have been there as well. These rocks were found in Arizona, when some men were looking for the best place to run a railroad. You may know that they were surprised, and when cleaning off the dust they found pictures that look very much like the kind very little children make when they are allowed a pencil to keep them good and quiet. There are snakes and turtles, frogs and tadpoles, birds and two men; there are circles with rays like the sun, and a cube, a kite, and window frame, and a w, a v, and a t, or signs that look very much like them. We know that they were painted by the Indians, and that they must tell some story, but we do not know what it is.

THE INTERIOR OF THE EARTH.—A curious well has been struck at Pittsburg, Pennsylvania. It produces at one and the same time cold water as pure and sweet as the dew that falls from heaven, salt water as briny as old ocean's waves, and a flow of gas that, when ignited, illuminates the entire surroundings. The well was drilled to obtain pure water for a bakery. At one hundred feet the fresh water was struck, and at two hundred feet the salt water and gas were found. Two casings were inserted, one for the salt water and gas, the other for the fresh water; and now, when the engine is started and the gas lighted, spectators behold the wonderful sight of fresh water, salt water, and fire, all coming out of one well at the same time.

ERMINE.—Ermine was for centuries the royal fur of England, and a law of Edward III. expressly prohibited any one, save members of the royal family, from wearing it. Then royalty surrendered its exclusive use, but the varying arrangements of the black tails were still minutely prescribed. The sovereign and the royal family are alone entitled to wear ermine trimmings to their robes of state, in which the fur is spotted all over with black in the proportion of a spot to about every square inch of the trimming. Peereases wear capes of ermine in which the spots or tails are arranged in rows, the number of rows denoting the degrees in rank. Peers have their scarlet robes trimmed with pure white ermine without any spots; but the rank is signified by the number of rows or bars of ermine. The judges robes are also trimmed with unspotted ermine, known in heraldry vocabulary as miniver.

CURRENT TOPICS.

Under this head will be found a summary of important events, of discovery, of invention; quite a survey of the world—especially the civilized world. See also narrow columns.

STANLEY EXPECTED AT MPWAPA.—Emin Pasha and Henry M. Stanley, it is reported, are expected to arrive at Mpwapa, a mission station about 150 miles inland on the direct route between Zanzibar and Lake Tanganyika, in November. The others in the party are Casti, the Italian explorer who has for years shared the fortunes of Emin, and six Englishmen. Some doubt the report that Emin is with the party; it would show he had deserted his province. How near is Mpwapa to the Equator? Describe Zanzibar's location.

UNLAWFUL SEAL FISHING IN THE BEHRING SEA.—The waters around the islands in Behring sea are the haunts of those valuable animals. It is said that unlawful seal fishing, unless checked, is likely to exterminate them. During the past year about 300,000 seals have been killed unlawfully. Most of these were killed in the water and sank before the sealers could get them. The seal fishing ground is owned by the United States and leased to a company. Describe the seal. Locate the Seal Islands. How long has the United States owned them?

TO CROSS THE ANDES BY RAIL.—The Peruvian congress has decided to have a railroad built from Oroya to connect with one of the navigable rivers on the eastern side of the Andes. What is the government of Peru? Who were the Incas? Give a sketch of Pizzaro. With what rivers could the road connect? How would it benefit Peru?

THE FRENCH IN MADAGASCAR.—The position of the French on the island is getting critical. The Hovas are preparing to denounce the protectorate. The Hovas are the ruling tribe. They are of medium height, and have black straight or curled hair, and hazel eyes. The island was not actually known to Europeans until early in the sixteenth century. Under Queen Ranavalona, who ascended the throne in 1861, Christianity became the state religion. What is the climate? What is a protectorate? (Authority assumed by a superior power over an inferior one.)

HAYTI'S NEW PRESIDENT.—Hyppolite was inaugurated president at Gonaives. He then made his farewell address to his army, and praised them for their valor. The coffee crop is good, and everybody believes that better times are coming. The value of a gold dollar has fallen from \$1.50 to \$1.28. Why is this a sign of better times?

AN ARTIST HONORED.—Melsouier, the artist, has received the grand cross of the Legion of Honor. He is seventy-eight years old. Among his paintings are "The Little Messenger," "The Painter in His Studio," and "The Chess-Players." They are small in size, but exquisite in finish. Mention some famous artists.

A ROYAL WEDDING.—In Europe when princes marry it often has a political meaning. Such is doubtless the case in the marriage of Princess Sophie of Germany to the Crown Prince of Greece. The bride is the sister of Emperor William who was present, as was also his mother, Empress Frederick. Relationship is by this marriage established between the royal houses of England, Germany, and Greece, for the bride is the granddaughter of Queen Victoria. What countries of Europe are empires? kingdoms? republics?

A MISSIONARY AND HIS FRIENDS KILLED IN NEW GUINEA.—The London Missionary Society has received news of the massacre by the natives of the Rev. Mr. Savage, together with a number of native teachers and several sailors in New Guinea. Where is New Guinea? To what countries have Christian missionaries been sent? What is the character of some of the tribes they meet?

BROOKLYN'S MEMORIAL TO THE SOLDIERS.—Gen. Sherman laid the corner stone of the memorial arch to be erected in Prospect Park plaza in honor of Brooklyn's soldiers and sailors who died in the late war. Generals Howard and Slocum were also present. Tell what you know of Sherman's march to the sea. What do you know of Generals Howard and Slocum?

AT THE TOMB OF LINCOLN.—The delegates from Central and South America to the Pan-American congress have been making an excursion during several weeks, to various historical and industrial points in the United States. The other day they visited Lincoln's tomb at Springfield, Ill. Mention traits of Lincoln's character. What is the meaning of Pan-American? What form of government predominates in South America?

MIRABEAU AND VICTOR HUGO.—It is reported from Paris that monuments to Mirabeau and Victor Hugo are being made. What was Mirabeau's connection with the French revolution? Describe him. What did Hugo write? Why was he banished?

CORRESPONDENCE.

USING A GLOBE.—What is meant when using a globe "to compute with the quadrant"? 2. State meaning and origin of "iron clad oath." J. B. G.

1. On many globes a strip of brass is attached to the meridian—it is divided into degrees; by it the distance between places can be measured. 2. It means one that is pretty hard to take—very strong. It was first used about the oath to be taken by the Confederates after the war.

CHILDREN OF WEAK MINDS.—What can be done for children of weak minds, that is, those who, while not idiots, are not able to be graded with the others? W. A. T.

This is a question difficult to answer in a short article. They need special training. They need manual training, of all things. They need gymnastics, plays, etc. The so-called idiot is a case of "arrested development;" this development must be continued. There ought to be a practical book on this subject.

TONIC SOL-FA.—Having seen the Tonic Sol-fa commended in the JOURNAL, I would like to use it. To whom shall I apply for books? T. H. LOOK.

Address T. F. Seward, 9 University Place, New York City.

USE OF SHALL AND WILL.—How shall we use shall and will properly? I am in doubt often. L. F. G.

The best way is to get some sentences firmly fixed in the mind. Thus you say:

"I shall see John to-morrow."

"Shall I see John to-morrow?"

"You will see John to-morrow."

"He will see John to-morrow."

All of this is plain; upon consideration the teacher will see that futurity is expressed by shall in the first person and will in the second person. Again we say:

"I will go to town," "You shall go to town," "He shall go to town"; to express determination.

Futurity and determination are the key words.

DRAWING.—Will you advise the best method of teaching drawing. I think I would prefer a chart or large sheet to use before a class. Eagle Mills, N. Y. F. H. HAWLEY.

You cannot teach drawing from a "chart"; you can teach copying, however. There is value in that; but we suppose you want to teach DRAWING. If you will turn to the JOURNAL of August 31, you will find the best directions that can be put on paper. Have you tried them? In teaching drawing you must have models; for drawing is a representation of things that have been seen.

LET THE GOOD WORK GO ON.—I love the JOURNAL. I have always attempted to work out the line of thought it exhibits so clearly. I know of many others who have read it and are also trying. I would like to write you fully about our work, for I know you would see we have not written in vain. C. M. P.

We rejoice to see the rising tide in behalf of making education as a profession. Let C. M. P. help it along by organizing his assistants into a class. Will he not?

SUMMER SCHOOL.—1. Will there be a summer school at Normal Park next summer? 2. I want to attend a practice school where I can see good teaching; I can read books at home. 3. Which school is the best for primary work? E. M.

1. Write to Col. F. W. Parker, Normal Park, Cook county, Ill. 2. Glad to hear you say this; the JOURNAL has urged for years that every institute should have a teacher teaching. Keep calling for it. Miss Patridge had such a school last summer. 3. Cannot answer this yet. In a few months the schools will be announced. But we say to you, you are a sensible person.

AS TO ORDER, ETC.—1. Can a room full of second year pupils be kept as quiet and marched from the building in the same order as older ones? 2. Would it be advisable to use TREASURE-TROVE for that grade, and in what way? Delavan, Wis. W. E. D.

1. Yes, they cannot go so fast; they need oversight all along the line if there are stairways, etc. 2. A part of TREASURE-TROVE is suited for this age. Stories should be read to them; then put it in their hands.

KEEPING IN.—1. Is systematic "keeping in" profitable? 2. If not, what method of punishment is admirable? A. L. S.

1. Decidedly not. But for what would you use it? For all misdemeanors? It is of itself an evil; in some states laws have been made against it, so that the teacher has certainly misused his power to "keep in." Let the teacher resolve in the morning not to keep in, except as a reward, to give needed help, to ask for help, etc. Let him open his heart to the pupils and say that he will not "keep in" if they will aid him. 2. You evidently use it as a punishment, for tardiness, whispering, etc. But does it cure the evils? We don't believe it. The best thing is to use more incentives. Why talk of punishment? Suppose a pupil is saucy and you say, "Stay in fifteen minutes," you have avenged your dignity, but have you cured the boy? You would say, "Must I not take notice of such a thing?" Certainly; your school will suffer if you do not. But you must make that boy feel that he has gone down in the estimation of the teacher and school. For further light, think, inquire, and read these columns.

GRAND JURIES.—1. What states have no grand juries? 2. How are indictments made in such states? M. D.

1. Do not think there are any. 2. Indictments can be made by a judge—that is, the person is held to answer a charge made by the people's officers.

DEBIOUS OF ADVANCEMENT.—I have an important district graded school and desire to make it the best I ever taught. I have taught about twenty terms. I have as professional works, "Page's Theory and Practice of Teaching," "De Graff's School-Room Guide," "Holbrook's Normal Methods," "Pheips' Handbook," "Swett's Methods," and I read THE SCHOOL JOURNAL. I could not teach without the JOURNAL. I am not satisfied with the quality of my work. My pupils do not come up to my standard of enthusiasm. Can you tell me of anything to read that will help me out? Understand, I want to make my school one that shall educate, not merely a place where lessons are recited. M. A. S.

It is easy to believe that you must succeed. But as you feel dissatisfied there must "be a screw loose." We should say that your pupils do not do enough of themselves. Rest not until, as it were, you are useless in that school. Have the pupils govern themselves, do the objective work, ask the questions, etc. Let us know more.

COURSE OF STUDY.—I have determined to take up a course of study as proposed in THE TEACHERS' PROFESSION. I think that many teachers will be benefited by following out the plan in that paper. Let us all move forward. Cleveland. M. C. REDDING.

A good many have undoubtedly started on the basis suggested. We would like to hear from all. Spread the news, good friends, that there is to be a TEACHERS' PROFESSION, and help us circulate the paper.

VENTILATION.—1. Please inform me of the best mode of ventilating a school-room not having improved apparatus for ventilation? 2. Should the trap-door in the ceiling be open? 3. Does a vessel of water on the stove aid in keeping the air pure? Good Hope, Pa. W. M. RIFE.

1. Supposing there is no apparatus provided, the best cheap apparatuses are screens made of thin cloth, cheese-cloth, mosquito netting, etc., to put in the windows.

2. In summer weather this aids; in cold weather the heat goes out and the cold comes in. You want to get rid of the cold air at the bottom of the room and bring the hot air down.

3. The stove dries the air; the water moistens it. See elsewhere in the JOURNAL for further light. Glad that even teachers feel interested. The teaching of arithmetic will not balance the misery that comes from foul air.

A CRITICISM.—In the issue of the SCHOOL JOURNAL for October 26, in reply to a question how the word Eiffel was pronounced, your answer was "as though spelled I-fel long i." This is incorrect, although it follows the rule, for the French themselves pronounce it as if spelled Ef-fel. This is the provincial pronunciation.

Just so. The editors have not been up the tower, though Mr. E. L. Kellogg has. But we asked "three, good, and true men" who had been up it this past summer, and they said it is called I-fel over there.

WHICH IS CORRECT?—Quite a spirited argument occurred in a school, between teacher and scholars, over the solution of the philosophy problem, as to what becomes of the cannon ball, fired with a velocity of 90 miles an hour, from the rear end of a railroad train moving with like speed. The teacher maintained that the ball would remain in the cannon, while one student very nearly suffered excommunication by stoutly affirming that it would drop, "Down straight on to the ground." The true solution to this problem is "glaringly apparent" to some, while by others here divers opinions are expressed. We apply to the JOURNAL for the correct answer. Susanville, Cal. T. F.

The cannon ball will be projected from the point where it started just as far, whether the car is in motion or stands still; that will be due to the force of the powder. Then, as the cannon will be "yanked" away from the ball, the cannon and ball will be twice as far apart when the ball touches the ground as it would if the car were not in motion.

DROPPING OF SLATES.—How can I prevent the dropping of slates, pencils, erasers, etc., and unnecessary noise with feet in my school? A. S.

You cannot. The pupils can; but do not scold them. Encourage those who do try to be careful. Give some time to this. Have times of "silent sitting"; begin with two minutes. You sit and look at them; they will study. Lengthen this to five minutes. Then compliment those who have done well. Ventilate the rooms. Give them "objective work." Make them happy as possible.

POLITICAL GEOGRAPHY.—I would like to get a book on methods of teaching political geography. My conscience will not allow me to "parrot over it" as my teacher (?) had me do. F. W. B.

Good. There are several books such as Frye's, King's, and Parker's, but probably what you want will be found in the articles on "The Earth" now running in the JOURNAL. These are "objective methods" and will interest a school wonderfully. They exhibit the methods used by the best teachers to-day. Read these with great care and begin with them at once. True you will need to know your geography pretty thoroughly; the teacher must be able to stand up and draw before his class; but he can do it. Let us hear more, and soon.

EDUCATIONAL NOTES.

THE Durango, Ill., schools lose a good man by the election of Supt. J. H. Smith, to the Rogers park school, in Chicago. We don't believe that this man will "settle down" as most city principals do. Alexander is said to have wept when he found there were no more worlds to conquer. The average teacher says when he has got to be a city principal: "Thank Heaven, I need not study upon educational matters any more; here I am for my natural life."

WE have received a long and able article on the "Teaching of German in the Public Schools," from Mr. P. H. Gruenenthal, of this city. We said "on educational grounds, we do not think the time of the pupil should be taken up with the study." This does not put it quite as we meant. We said "educational grounds" to oppose the "political grounds" which are being put forward. We cheerfully admit (who could do otherwise?) that the study of German, and of any language, has great educational benefits. The point we make is that the public school has a specific mission, and that it takes it out of that to teach German, French, Latin, Greek, or any language whatever; not that the teaching of these languages do not have an educational value. There is a specific field for the American public school; the curriculum of that school can be easily overweighted. Not everything good for a child can be taught in the public school. If we have a much larger immigration from Italy, there will be efforts made to have the Italian taught. How would a German like it, if he was in the small minority, to be taxed to pay for teaching French, supposing that to be selected?

AMELIA B. EDWARDS, vice-president and honorary secretary of the Egyptian Exploration Fund, and author of several works of fiction, travel, and archaeology, will soon arrive from England. She will deliver a course of lectures at Columbia College, the University of Pennsylvania, Peabody Institute, Boston Museum of Fine Arts, and before American archaeological and geographical societies. Here is a field of work for other women. Why should not some of the eminent ladies in leading schools give to the public the results of the study of their specialties.

At the annual meeting of the trustees of the Peabody Educational Fund in New York, Mr. Curry, the agent, reported that the South had, since the war, devoted \$122,000,000 to schools. This certainly looks well; but the great thing is to rouse a public interest in schools. We do not mean the interest of a few educated men and women. That now exists; but the interest of all who can vote, even the poorest.

PRINCE BISMARCK was anxious to have Mr. Edison's photograph shown to him. The question was raised as to the possibility of using it as a means of instruction in universities and schools.

THERE are 8,000 medical women in the United States; some have large incomes. One of the most successful homeopathic women physicians of the West is Miss McDean, of Helena, Montana, whose income last year is said to have reached \$10,000. She received her medical education in Boston and Berlin. The number of "lady doctors" is increasing every year. Austria prohibits women from entering the medical profession. Russia and China permit them, and the queens of Italy and Roumania employ women physicians.

THE world does move. The sultan of Morocco subscribes to and reads several newspapers, and next we shall hear of teachers reading school journals!

THE Hawaiian cabinet has instructed the minister resident at Washington to ascertain whether the government of the United States is willing to entertain a proposition for a new treaty. They want to send their products here and not pay a duty; also to receive them—except whisky.

FORM STUDY and drawing (the essential step to manual training) is making evident progress in Pennsylvania. Miss Landon Graves is at the head of this new field of work in the new normal school at Slippery Rock. She has been an assistant in Prang's classes, and has a fine reputation for ability in teaching drawing as it ought to be taught.

In West Virginia the subject of manual training is being considerably discussed; especially the practicability of putting it into a public school course; as yet no decided steps have been taken to carry out a plan. Let the one who adds anything to drawing, gymnastics, and penning (these are all manual training) write to us. Begin it, good friends. No city in the United States would be more benefited by manual training than Wheeling, as it is a great manufacturing city. What are the teachers of Wheeling going to do about it?

THE state of Colorado is manifesting great educational activity. It has been divided into six normal districts. In August the teachers of each district gathered for a two weeks' institute; each had a conductor and two assistant instructors. The aim of the work was strictly professional. Every teacher carried away valuable knowledge bearing directly on his work. State Supt. Dick visited all the institutes himself. The average attendance was found to be one hundred.

An appropriation has been made for a normal school at Greeley, to cost \$110,000, and to accommodate six hundred pupils; construction will soon commence.

A chair of pedagogy has been established in the state university.

The University of Denver has an excellent manual training school, and the board of education in South Pueblo have introduced it—a movement which has an able leader.

The plan of furnishing text-books by the district is being followed.

THE Italian government has refused to receive Washan Effendi, whom the Porte wished to appoint as Turkish ambassador to Italy. Really, we shall have to ask the "boys in the first class" to explain this to us.

THE people of the South do not know what to do with the negro. We say educate him. Here is a note for Southern doubters to read: In St. Louis, Mo., there is a society of colored women numbering forty-three members, which has raised recently the sum of \$1,300 for the support of the Home for Colored Orphans. The members visit jails, workhouses, and hospitals, caring for those of their own race.

THERE is an effort being made for the establishment in the University of Pennsylvania of a department of pedagogics. This year's graduating class have undertaken the raising of ten thousand dollars to provide for a three years' salary for a pedagogic professor, and to found a library; and at the expiration of three years it is believed that the department will be self-sustaining. Thus the world moves. By and by there will be none but trained teachers.

THREE boys, attending gymnasia or high schools in Berlin, have shot themselves on account of disappointment in not being promoted into higher classes. Does this prove that it is not good for boys to go to high schools? No; there are ministers who become insane; there are men who kill themselves for want of money, or from having too much. Life on this planet has its risks.

THERE is a "Missionary Training Institute" in Brooklyn. It sent four missionaries to Africa in 1885; five others to Africa, India, and China in 1886; three to China in 1887. They study the Bible, the Chautauqua course, the Chinese, Japanese, or Hindustani languages, cookery, nursing, dressmaking, carpentry, bricklaying, plumbing, etc. These last are got at the Pratt Institute. Thus does "the fetish of manual training" find its way even into missionary preparation.

A TEACHERS' Institute will be held at Delhi, N. Y., Nov. 11-15. E. R. Harkness, commissioner.

THE constitution of the new state of Wyoming makes provision for "free elementary schools of every kind and grade; a university and such other institutions as may be necessary." "No part of the school fund shall be used to support or assist any private school or any school controlled by any church or sectarian organization." All pupils must go to school for three years; no distinction is made regarding sect, race, or color. Schools must be open at least three months.

THE article on the kindergarten in last week's JOURNAL was credited to Supt. Balliet. It was from the report prepared by his predecessor, Supt. A. P. Stone.

NEW YORK CITY.

Mr. Herbert Ward, the young Englishman who accompanied Henry M. Stanley on his explorations into Africa, gave an interesting talk to the pupils and friends of Packard's Business College, November 1. Mr. Ward illustrated his accounts by the use of an enlarged map of Africa. He pointed out his course down the Congo river, and enlivened his description with some thrilling tales of cannibal life and jungle horror. He was listened to with an eager interest that verified Mr. Packard's introductory remark that Mr. Ward would have a most appreciative audience in his boys and girls. Teachers get your pupils to hear Mr. Ward; he equals Paul DuChaillu. It will do them good.

Mrs. Florence Cory of the school of industrial art and technical design for women, 184 Fifth avenue, gave an exhibition October 30, of her pupils' work. There was on exhibition a large number of practical designs for stained glass, carpets, silks, oil-cloths, printed and woven fabrics, table linen, wall paper, and various art manufactures.

The school began its ninth year on October 7. This school makes a practical business of getting up designs for industrial art. It has correspondence pupils all through the United States and Canada. The object is to make a remunerative field of occupation for women. Two young ladies who came to the school in November last were conversed with; this spring they sold fourteen designs for \$12 each.

THE Alumnae of the normal college, this city, are asking that one of the 4384 women who have been graduated shall be appointed on the board of education.

A PETITION has been presented to the mayor of this city, against the re-appointment of the two lady school commissioners; and it is wholly signed by lady teachers! Why this is, is best stated by a lady teacher: "A man will listen to a woman and believe her; a woman in power seems to consider it her business to doubt us and spy upon us." Men make best tyrants after all, if there must be a tyrant. Howells makes a woman say, "I declare you men are splendid."

A counter petition has been presented by other lady principals in favor of the re-appointment of these two ladies. This is signed by teachers and by many eminent citizens besides. Now the question is not a question of gender at all, and Mayor Grant ought not to look at it from that point of view. The New York City schools are passing through a marked change; the new education, long rebuffed, long waiting at the doors is bound to come in. This is really at the bottom of the whole matter. There are many who are personally opposed, undoubtedly, to these ladies; it is a new feature, and all new things have their opponents. We advise Mayor Grant to appoint those persons who will study the interests of the schools from this high standpoint, and lose sight of all other questions.

STATE ASSOCIATIONS.

CALIFORNIA, first week in January, Los Angeles, Prof. Ira More, Los Angeles, president; Miss Mary E. Morrison, 2223 Folsom St., San Francisco, secretary.

ILLINOIS, Dec. 25-27, Springfield.—Dr. S. H. Peabody, Champaign, president; Miss Lyde Kent, Jacksonville, secretary.

INDIANA, Dec. 26, Indianapolis.—J. A. Zellar, La Fayette, president; Anna Lemmon, Bloomington, secretary.

IOWA, Dec. 31, Jan. 1-3, Des Moines.—Miss Lottie E. Granger, Clarinda, president.

KANSAS, Dec. 25-27, Topeka.—J. N. Wilkinson, Emporia, president; J. W. Ferguson, Kansas City, secretary.

MAINE, Dec. 20-28, Bangor.—George C. Purington, Farmington, president; W. Esterbrooke, Gorham, secretary.

MICHIGAN, Dec. 25-28, Lansing.—L. R. Flake, Albion, president; H. M. Slawson, Coldwater, secretary.

MISSOURI, Moberly, Springfield and Warrensburg.—S. S. Laws, president; L. E. Wolfe, Moberly, secretary.

NEW HAMPSHIRE, Nov. 8-9, Concord.—L. S. Hastings, Claremont, president; Isaac Walker, Fembroke, secretary.

NEW JERSEY, Dec. 25-28, Trenton, N. J.—A. B. Guilford, Jersey City, president; J. W. Kennedy, Newark, secretary.

NEBRASKA, March 25-27.—Chas. E. Bessey, Lincoln, president; Emma Hart, Wisner, secretary.

NORTH DAKOTA, Dec. 27-28, Grand Forks.

SOUTH DAKOTA, Dec. 26-28, Yankton.

S. E. NEBRASKA, Nov. 28-30, Nebraska City.

WASHINGTON, Jan. 1-2, Ellensburg.—J. H. Morgan, president.

A GOOD teachers' bureau, like the NEW YORK EDUCATIONAL BUREAU, often finds some teacher of remarkable ability in a place wholly unsuited to him. Sometimes a school-board thinks "he will not move if we cut down his salary \$100." Without the aid of the Bureau he must often submit. Teachers so situated should address, with stamp, HERBERT S. KELLOGG, Manager, 25 Clinton Place, New York.

The worst feature about catarrh is its dangerous tendency to consumption. Hood's Sarsaparilla cures catarrh by purifying the blood.

BOOK DEPARTMENT.

NEW TEXT-BOOKS.

LESSONS IN HYGIENE; OR THE HUMAN BODY, and How to Take Care of it. The Elements of Anatomy, Physiology, and Hygiene for Intermediate and Grammar Grades. Being an Edition of How we Live, Revised to Comply with the Legislation Requiring Temperance Instruction in Schools. By James Johnson and Eugene Bouton, Ph.D. New York: D. Appleton & Co. 213 pp.

The importance of this volume, with its teachings, is felt by all thoughtful teachers and students. The book is elementary—not a scientific treatise for advanced students—but, beginning with obvious relations, its method is inductive, each new topic growing out of the one that precedes it. Its aim is to present the laws of life in such a practical and reasonable way, that they will become a guide to living. In the treatment of each topic, function is considered before structure, and the first step is to show that, for purposes of life and growth, there is a need. In a series of twelve chapters, the following subjects are fully discussed: The Body and its Parts; Eating and What Comes of it; Alcohol and its Effects; Alcoholic Drinks and Tobacco; How Digestion Goes on; How the Blood gets Purified; How the Blood Nurtures the Body; How the Body is Able to Move; How the Body is Able to Stand; How the Body is Covered; How Bodily Motion is Directed; How the Mind gets Ideas and Expresses Them. Following these chapters are many valuable "Suggestions for Preserving the Health of Teachers and Pupils in Public Schools." A short dictionary of "What the Words Mean" is given, followed by a synopsis of the bones of the body. There is a great amount of practical knowledge in this small book.

FIRST LESSONS IN GREEK. Adapted to the grammar of Goodwin, and to that of Hadley, by Frederic D. Forest Allen. By James Robinson Boise. Revised with Additions by Judson G. Pattengill. Chicago: S. C. Griggs & Co, 1889. \$1.25.

Dr. Boise's Greek Lessons has long been recognized by scholars as a text-book of sterling worth. It is here presented in an improved form, carefully revised by the principal of the Ann Arbor high school. This new edition recognizes the latest and most approved methods of teaching Greek, and is in every way fully abreast with the ripest scholarship of the times. As the reviser says, "great progress has been made in textual criticism, especially in determining what forms are strictly Attic, and what belong to other dialects." Some statements of the simpler principles of syntax are introduced into the book, although they are not intended to cover all the ground, but to enable the pupil to begin the study of the Anabasis intelligently. The book has been so widely valued that it does not need so critical a review as a new Greek lesson book would require. It is an old and valued friend in a new and somewhat improved dress, and as such needs no formal introduction or commendation from us. Its character is established.

ANCIENT HISTORY FOR COLLEGES AND HIGH SCHOOLS. By William F. Allen and P. V. N. Myers. Part I. The Eastern Nations and Greece. By P. V. N. Myers. Boston: Ginn & Co., 1889. Mailing price, \$1.10.

It is a mark of progress that our schools are taking more interest than ever before in the study of history, for, as Dr. Myers says, "it is the narrative of the life of humanity." What can be of greater interest to man than man. This book places before us a graphic picture of what is called ancient history. Our author points out the connecting links between the history of the East and that of the West, and shows from what source the primary elements of art and general culture came. This gives his book a unity which is highly commendable. But in doing this he takes care to show that "the determining factor in the wonderful Greek development was the peculiar genius of the Greek race itself." A most commendable feature of this book is its *historical spirit*. This takes it out of the list of chronological and statistical compilations, and puts it in the company of the real histories. We see in its pages living, feeling, independent thoughts. More and more are our schools demanding such histories as this, and it is a sure sign of intellectual progress. Even pupils in our high schools object to being required to become intimate with dry bones, and cry out for living flesh and blood. We commend this book to those who want an ancient history, pervaded by an historical, and so an interesting spirit.

NOTES OF LESSONS FOR YOUNG TEACHERS. By John Taylor. Boston: School Supply Company.

That this book is the work of a practical teacher is plain. Its object is to give young teachers some ideas of lesson hearing. He explains the essential features of a lesson, sketches out a plan, and discusses the matter and method according to this plan. In doing this, he tells what a lesson is not—is not a lecture or a series of questions; then he shows that there must be *explanation, description, picturing, etc.* The need of illustration is shown, possibly of experiment or diagram. The need of practical results is pointed out,—knowledge, interest, increased intelligence, and moral effects. The author thinks the teacher should specially prepare each lesson and he is right. The teacher cannot take up a school where he left it yesterday without having planned and studied. Thousands think so, however. What shall the teacher do? Hints are given here and a plan of notes is offered. Suppose the subject is the "Mediterranean sea;" then its physical character is studied from text-books—its length, breadth, depth, etc. Next its commercial importance, the surrounding countries; the products of each, its ancient history, etc. All this must be carefully studied if the teacher would stand before his class and awaken an interest in studying this part of the earth. Enough has been said to show that this book will be of real service to the practical teacher. It is a small volume and very handy to use; it says a great deal in its one hundred pages.

THE TEACHER'S MANUAL OF GEOGRAPHY. I. Hints to Teachers. II. Modern Facts and Ancient Fancies, by Jacques W. Redway. Boston: D. C. Heath & Co., 1889. 150 pp. Appendix, pp. 150-174. 12mo. Cloth.

The author of this very attractive book is not of the opinion that the average teacher needs pedagogical regeneration; on the contrary he believes that less energy devoted to improvement of methods and a little more to the quality of the material taught, would not be amiss. The first part of the book contains many valuable hints on oral

work, out-of-door lessons, the use of pictures and models, how a geography recitation should be conducted, how to draw maps scientifically, and a clear exposition of many ordinarily bothersome facts in mathematical geography. Part second treats of geodesy, orography, hydrography, meteorology, history in geography, and political and other boundaries. The treatment is fresh and unmistakably interesting. The appendix contains articles on Measuring Ocean Currents, The Source of the Mississippi, The Gulf Stream as a Factor in Climate, The Orthography of Berlin's Name, and a bibliography of geographical reading. It is unfortunate that the author was not better informed concerning the source of the Mississippi. That the claims of Capt. Glazier should be discussed is not to be wondered at, but that a man who writes himself down a "geographer," and is the author of five different treatises, should have to use an erratum slip to inform his readers that he did not know until 1889 of Chambers' visit in 1873, to this region, is a matter of blank amazement. We would refer our readers to an article on "Glazier's Source of the Mississippi" to be found in THE SCHOOL JOURNAL of August 3, 1889, page 36, and also to a note on "Elk Lake" in THE SCHOOL JOURNAL of August 10, 1889, page 59, in which they will find much valuable information pertinent to this matter and omitted from Mr. Redway's appendix.

CONSTITUTIONAL HISTORY OF THE UNITED STATES AS SEEN IN THE DEVELOPMENT OF AMERICAN LAW. A Course of Lectures Before the Political Science Association of the University of Michigan. By Judge T. M. Cooley, of Ann Arbor; Hon. Henry Hitchcock, of St. Louis; Hon. George W. Biddle, of Philadelphia; Professor Charles A. Kent, of Detroit; Hon. Daniel H. Chamberlain, of New York. New York and London: G. P. Putnam's Sons. The Knickerbocker Press. 296 pp. \$2.00.

These lectures on constitutional law were delivered under the auspices of the Political Science Association, of the University of Michigan, in April and May of the present year. The subject to which these lectures relate, the constitutional law of the United States, is a branch of jurisprudence which is the specially characterizing part of our legal system, and has been declared to be "the pride and glory of our country." The first lecture, by Dr. Cooley, is most excellent. After directing attention to certain leading and controlling facts in relation to the constitution, Judge Cooley explains the place of the Supreme Court in our Federal system, and considers the more important cases involving questions of constitutional law, decided by the court prior to the appointment of Marshall. The second lecture, by Dr. Hitchcock, portrays the public life and services of Chief Justice Marshall as a soldier, lawyer, legislator, diplomatist, and statesman, as well as delineating his judicial career, and there are few, perhaps, who will question the truth of the statement, that no judicial career in history affords a parallel to that of Marshall. The third lecture, by Dr. Biddle, covers a very important period in the history of our country, and one which appeals to the interest of every student of our constitutional system. The subject of this lecture is, "Constitutional Development as Influenced by Chief-Justice Taney." The fourth lecture, "Constitutional Development as Influenced by Decisions of the Supreme Court since 1864," by Charles A. Kent, A.M., covers the period included in the judicial careers of Chief-Justices Chase and Waite. It is a period of great historical interest and importance. The fifth lecture was delivered by Dr. Chamberlain, of the bar of the city of New York, and is found to contain an interesting discussion of the relations which exist between the states and the United States. The respective limits of the jurisdiction of the state and federal courts are clearly stated—the extent to which the supreme court of the United States will go in following the decisions of a state court in matters of local law,—and a comparison is instituted between the character of the state and federal judiciary as a body. The subject of these lectures is of general importance to every American citizen who desires to understand the government under which he lives.

ELEMENTS OF ENGLISH. An Introduction to English Grammar. For the Use of Schools. By George Hodgson Ricker, A. M. Chicago: The Interstate Publishing Co. Boston: 306 Washington Street. 135 pp. 36 cents.

The author of this little book is a well known teacher of successful experience, and he has prepared a book which is at once clear and concise, bringing the elements of language within the comprehension of the pupil in a simple and attractive form. Part First is designed for pupils from ten to twelve years of age, and consists of about sixty pages. In this part are treated, briefly, the Statement, Question, Command, and Exclamation, with enough Punctuation for immediate use. Oral and written exercises are made a part of each lesson. Part Second begins with a treatment of the sentence in its various forms. After a few lessons on Letter-Writing, relative and interrogative pronouns, and the various verb forms, are treated. The principles of analysis and synthesis are also concisely stated. Practical lessons on spelling, capital letters, and punctuation, are frequently given—and, as a whole, it is a decidedly practical common-sense book. The make-up is neat and attractive.

GRADATIM. An Easy Latin Translation Book for Beginners. By H. R. Heatley, M. A., and H. N. Kingdon, M. A. Revised for American Schools by W. C. Collar. Boston: Ginn & Co., Publishers. 139 pp. 45 cents.

"Gradatim" is a most useful book to accompany and supplement the first year's work in Latin. The Latin is pure, simple, and idiomatic, easily understood by young students, interesting and even amusing. If Cæsar is to be read as the first classical author, this book may be used, to great advantage, by giving practice in translating easy Latin. The book is divided into two parts: Hints to Beginners, and Table of Stories. Part first contains the grammar of the book, and part second, a series of short, and many of them, amusing stories. For example:—The Naughty Boy,—The Dirty Ditch,—The Young Doctor,—The Sporting Doctor,—Orchard Robbing,—Too Clever by Half,—The Green Cheese,—etc. These are a few of the one hundred and twenty stories found in this rather small volume. There is life and freshness about these stories that will tend to create an interest in the mind of the student, and give a real taste for translating Latin. A live book of Latin stories is a rare thing.

LITERARY LANDMARKS, for Young People. By Mary L. Burt. New York and Boston: Houghton, Mifflin & Co. 75 cents.

This is intended as a guide to good reading for young people and a teachers' assistant; and being compiled by the teacher of literature in the Cook County Normal

School of Illinois is naturally a practical book for the school room. It is the result of twenty years' work in the school-room; and is broad enough to meet the demands of every class of readers and to answer all questions propounded in the many letters to the author asking advice and suggestions in the selection of books for school and home libraries.

COMPLETE MUSICAL ANALYSIS. A System Designed to Cultivate the Art of Analyzing and Criticizing, and to Assist in the Performance and Understanding of the Works of the Great Composers of Different Epochs. By A. J. Goodrich. Cincinnati: John Church & Co. \$2.00.

The author's aim in this volume—over which he has spent twenty-five years—is to comprehend within its pages several important factors that combine to make a musical education complete. He unfolds a method of carefully graded auricular exercises that teach the art of listening to music intelligently, and to classify and distinguish different forms and styles of composition. He also teaches how to examine music away from any instrument, as this, he thinks, is necessary to a correct understanding of how to interpret the composition itself upon the piano. There is much in this volume to interest and enlighten the teacher or advanced pupil. But among the forty-five chapters, one that could be well spared is that devoted to analyzing American orchestral and choral works. The compendium, although arranged to illustrate the chapters systematically, will be of use by itself in suggesting piano pieces for teachers to select from.

PERSPECTIVE. A Series of Elementary Lectures. By Ada Cone. New York: William T. Comstock, 23 Warren Street. 62 pp. \$1.00.

These lessons in Perspective are addressed especially to those artists, or persons, desiring to study art, who may need a concise and simple manual on the subject. Upon examination, it will be seen that elementary perspective is put on a level in treatment with text-books on other subjects. The first chapter is a model of clearness and comprehensiveness; the explanation of the vanishing point is especially interesting, and the use of diagonals, of squares, and of the geometrical scale have been told with great distinctness. The application of the principles to the drawing of flowers is novel, and will be thoroughly appreciated by flower painters. There are many students whose school studies do not include perspective, and to those, this book of Miss Cone's will be of great value, as they can take it up for themselves. It is simple and practical, is quite sufficient to fill the wants of the ordinary enquirer, and should fall into line as a hand-book to teachers, and a preliminary manual to students.

REPORTS.

SIXTH ANNUAL REPORT OF THE BUREAU OF STATISTICS OF LABOR OF THE STATE OF NEW YORK, 1888. Charles F. Peck, commissioner. Albany: The Troy Press Company, printers.

These state reports will go a long way as helps to the settlement of labor questions by showing where evils exist. An immense amount of labor and pains must have been expended in compiling this volume, for it contains 1083 pages of closely printed matter. The wages, hours, and in some cases the rates paid in leading cities, of all the industries of the state, have been tabulated and carefully indexed. The introduction gives the views of Commissioner Peck in regard to points relating to the labor question. The book closes with a compendium of causes given by employers and labor organizations for the rise or fall of wages.

ANNOUNCEMENTS.

LONGMANS, GREEN & Co. publish "France and Her Republic: A Record of Things Seen and Heard in the Centennial Year, 1889," by W. H. Hurlbert.

J. B. LIPPINCOTT Co. announce "Foods for the Fat: A Treatise on Corpulency, and a Dietary for its Cure," by Nathaniel Edward Davies.

SCRIBNER & WILFORD's publication, "Memorable London Houses," describes the noteworthy dwellings of the world's metropolis.

The **SCRIBNERS** are to issue in book form Prof. Alexander Johnston's article on "The United States: Its History and Constitution," which first appeared in the "Encyclopaedia Britannica."

D. C. HEATH & Co. have arranged to publish at once "Hoffmann's Tales from History."

CASSELL & Co. are about to publish "The Journal of Marie Bashkirtseff," a young Russian artist who died in Paris in 1884.

WHITE & ALLEN are issuing a series of volumes covering the folk-lore of different nations. Four volumes have already been published, treating of Germany, Ireland, Scotland, and the Orient.

ROBERTS BROTHERS publish some excellent children's books, among which are "Filipino the Spy," by Lily F. Wesselschoeff, in which Filipino does some clever service in trapping Mr. Fox; and "Their Canoe Trip," by Mary P. W. Smith.

LEE & SHEPARD publish "One Merry Christmas Time," a charming combination of delicate designs and appropriate verse.

A. C. McCLURG & Co. announce the publication of a collection of the finest passages in poetry that have been inspired by its twin sister, music, under the title "Musical Moments."

HOUGHTON, MIFFLIN & Co. will soon publish for Dr. W. E. Griffin "The Lily Among Thorns," a book devoted to the interpretation of Solomon's Song.

CATALOGUES AND PAMPHLETS RECEIVED.

Catalogue of the Union School, Earlville, N. Y., 1889-90. S. C. Kinn, principal.

Bulletin of the Agricultural Experiment Station, Cornell University, for September, 1889: A Study of Windbreaks and their Relations to Fruit-growing.

The Disposal of the Dead: A Paper read before the Kings county medical society, by John M. Peacocke, M.D., 247 Madison street, Brooklyn, N. Y.

Catalogue of the State Normal School, Indiana, Pa., 1888-9. Z. X. Snyder, A.M., Ph.D., principal.

Classified Catalogue of Electrical Books. Published and for Sale by the W. J. Johnston Co., Limited, Times Building, New York.

MAGAZINES.

The November *Book Buyer* has a portrait and sketch of Paul B. Du Chailu, the famous explorer. The same number also has a portrait and sketch of Amelia B. Edwards.

Mr. Stoddard contributes to the November *Lippincott's* a sketch of William Cullen Bryant.

A prominent feature of the *Atlantic Monthly* next year will be a serial story by Margaret Deland, author of the notable "John Ward, Preacher."

In the November *North American Review* Cardinal Gibbons, Bishop Potter, and Col. Ingross give their opinions on the question, "Is Divorce Wrong?" Senator Vest writes of "The Hopes of the Democratic Party," and Senator Hoar of "Are the Republic Means to Stay?"

SOME RECENT ADOPTIONS OF THE NEW NATIONAL MUSIC COURSE.

NOVEMBER 1, 1889.

It should be borne in mind that probably the National Course was before in more extensive use than all other systems together.

MAINE: Auburn, Belfast, Orono, Foxcroft, North Anson. VERMONT: St. Johnsbury. MASSACHUSETTS: Lawrence, Somerville, Pittsfield, Northampton, North Adams, Clinton, Beverly, Westfield, Plymouth, Wakefield, Amherst, Holliston, Cohasset. CONNECTICUT: Middletown, Danbury, Winsted. NEW YORK: Olean, Oneonta, Penn Yan, Warsaw, Chatham, Philmont. NEW JERSEY: Camden, New Brunswick, Bloomfield, Somerville, Raritan, Egg Harbor City, Franklin, Metuchen, Franklin Furnace. PENNSYLVANIA: Titusville, Huntingdon, Oxford, Conshohocken. DELAWARE: Wilmington. MARYLAND: Cumberland. WEST VIRGINIA: Wheeling, Huntington. GEORGIA: Atlanta, Macon, Columbus. LOUISIANA: New Orleans and the State. TEXAS: Galveston, East Dallas, Paris, Huntsville. KENTUCKY: Louisville, (Re-adopted after an offer of even exchange from the publishers of another Course), Covington. TENNESSEE: Clarksville. OHIO: Dayton, Zanesville, Findlay, Lima, Steubenville, Delaware, Fremont, Massillon, Piqua, Wooster, Van Wert, Greenville, Troy, Elyria, Wellsville, Athens, Port Clinton, New Carlisle. INDIANA: Hammond, Bloomington, Winchester. ILLINOIS: Upper Alton, Giltman. IOWA: Burlington, Marshalltown, Mt. Pleasant, Marengo, Manson, North English. MICHIGAN: Manistee, Battle Creek, Negaunee, Ironwood, Wyandotte, Hillsdale, Tecumseh, Northville. WISCONSIN: Manitowoc, Kenosha, Waukesha. MINNESOTA: Albert Lea, Cannon Falls. MISSOURI: Sedalia, Bethany. ARKANSAS: Paris. DAKOTA: Rapid City, Madison. NEBRASKA: Hastings, Beatrice. KANSAS: Anthony, Burlington. COLORADO: Sterling, Durango. CALIFORNIA: San Pedro. WASHINGTON: Dayton.

Normal Schools, Seminaries, Parochial Schools, and Private Schools of all kinds might be added to this list. In a very small part of the list the adoption consisted in taking the New Course in place of the Old.

The NATIONAL COURSE is believed to be the best because founded on the deepest knowledge of child nature, following the soundest educational principles, embodying the finest and most durable music and literature, and approved in use under the most varied conditions.

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TEACHERS' AGENCIES.

MANY GOOD POSITIONS ARE BEING FILLED By the TEACHERS' CO-OPERATIVE ASSOCIATION even at this late date. Here are the positions we filled Oct. 2nd, and "it was not a very good day for positions either."

TOWN.	POSITION.	TEACHER PLACED.	FROM
N. Washington, Ind.	Principalship,	S. A. Harker,	Portland, Ind.
Bloomfield, Iowa,	Music Director,	S. A. Tubbs,	Springboro, Pa.
Mapleton, Iowa,	H. S. Asst.,	V. Alexander,	La Porte, Ind.
Illinois,	Superintendency, (\$1,200),	(requested not to publish.)	
Marshall, Tex.,	Latin Prof., (\$1,000),	E. M. Ely,	Groton, Dak.
Louisville, Ky.,	Elocution,	A. L. Powell,	Jacksonville, Ill.
Canon City, Colo.,	Primary,	Ada Rockwell,	Hornellsville, N. Y.
Longview, Tex.,	Primary,	Anna F. Griggs,	Springfield, Mo.
Hyde Park, Ill.,	Greek and Latin,	R. S. Smith,	Marquette, Wis.

Many vacancies are now coming in for the term beginning January 1st. It costs you nothing for our circulars and to learn what our work actually is. You will find among the names of teachers we have placed many of your fellow teachers and teachers of your personal acquaintance. Send for these private lists and post yourself on the work we are doing. If you are a successful teacher, and can show this, we can certainly help you.

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THIRD—Each essay must be forwarded with some recognized retail watch dealer's certification that the writer is within the specified age.
FOURTH—The article must be written on one side of the paper only.
FIFTH—For convenience of the type-setter it is preferable to use slips of paper about five inches wide and not over eight inches long—each sheet being numbered consecutively.
SIXTH—We cannot return rejected MSS., but should we use any beside the four prize winners' we will pay therefor an equal amount to the lowest prize—\$10.00.
SEVENTH—The Judges will be L. J. Mulford, Editor of *The Jewelers' Circular*; John W. Senior, Editor of *The Jewelers' Review*; and Geo. A. Reed, Editor of *THE WATERBURY*.
EIGHTH—All competing Essays must be mailed on or before December 14th, 1889.
NINTH—Each Essay should be signed with a nom-de-plume and accompanying it a sealed envelope with the nom-de-plume upon its face. This, of course, should be put within the cover of the manuscript. Inside the inclosed envelope should be a slip of paper with the nom-de-plume written upon it and below that the writer's full address. This envelope will not be opened until after the judges have made their award. Follow these directions explicitly.
TENTH—All communications must be addressed to the "EDITOR OF THE WATERBURY," 92 & 94 Liberty Street, New York.

The Waterbury Watch Co.,—In addition to their world-famous "Long-Wind, Series E," which they continue to manufacture as heretofore, have brought out a new Short-Wind and Slew-Set watch, called "Series F," for gentlemen, and also a Short-Wind for ladies, known as "The Ladies' Waterbury, Series L." All of these three Series are for sale only by retail watch-dealers. Our young friends should remember the new Short-Wind Waterbury's—just the thing for Christmas.

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"MORAL: INSURE IN THE TRAVELERS."

THE PUBLISHERS' DESK

Among the most interesting and instructive books of the year, for the general reader and especially for teachers, may be counted The Three Germanys, with glimpses into their history, by Hon. Theodore S. Fay, of Berlin; History of the city of New York, by Mrs. Martha J. Lamb; Lights of two Centuries, fifty sketches of noted men, by E. E. Hale, particularly valuable for young people's libraries and supplementary readings; Barnes' Popular History of the United States, with a new chapter on President Harrison. The above books are of permanent value, and also suitable for the holidays; and are published by Messrs. A. S. Barnes & Co., 111 William street, New York.

The thousands of teachers who have long used the "Riverside Literature Series" and have found it an indispensable adjunct in school work, will be gratified by the announcement of a new volume—No. 43 in the Series—entitled "Ulysses Among the Phæacians," being extracted from the Translation of Homer's Odyssey, by William Cullen Bryant, and published, like the rest of this valuable series, by Messrs. Houghton, Mifflin & Co., of 4 Park St., Boston. The Odyssey has been called the Robinson Crusoe of antiquity, and every one who wishes a peep into ancient Greece should read this poem and its companion classic the Iliad. It seems remarkably fitting that the translation of one of the foremost of American poets should in this form be brought intimately to the acquaintance of American school people.

As an instance of the quick recognition of merit, some recent adoptions of the National Music Course may be cited. Published by Messrs. Ginn & Co., of Boston, New York, and Chicago. This course has now been adopted in Belfast,

Maine; St. Johnsbury, Vermont; Lawrence, Northampton, North Adams, Clinton, Beverly, Amherst, Massachusetts; Middletown, Danbury, Winsted, Connecticut; Oneonta, Penn Yan, New York; Camden, New Brunswick, New Jersey; Titusville, Huntingdon, Pennsylvania; Wilmington, Delaware; Atlanta, Georgia; New Orleans, Louisiana; Galveston, Texas; Louisville, Kentucky; Dayton, Ohio, and other principal cities and towns throughout the Union. Normal schools, seminaries, parochial schools, and private schools of all kinds might be added to this list. The National Course is believed to be one of the best because founded on a deep knowledge of child nature, following sound educational principles, embodying the finest and most durable music and literature, and approved in use under the most varied conditions.

The attention of our readers is called to the advertisement of the Waterbury Watch Company, which appears in this week's issue of the JOURNAL, and which also appeared in the November number of the TEACHERS' INSTITUTE; in which an offer is made of prizes for the best essays upon "What the Waterbury Watch has done for the World." These prizes are four in number: \$50, \$25, \$15, and \$10. The essays are to be limited to one thousand words each, and must be addressed to the editor of The Waterbury, 92 Liberty street, New York, a monthly publication issued by The Waterbury Watch Company. The time limit for sending in the competing papers has been extended to December 14.

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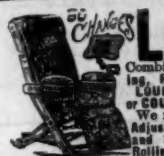
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